



INSPIRING TEACHERS
CHANGING LIVES

Yearbook 2019

Action-based research
conducted in schools

2019



Our Membership



Research

This Yearbook features selected summaries of the action-based research projects completed in 2019 by members of the School Leadership Programme and Subject Leadership Programme.

We are also celebrating excellence in subject leadership through the Bernice McCabe Award. This award has been created to remember Bernice, founding Co-Director of the PTI, and to promote inspiring work driven by the values of the PTI.

The judges considered departments that demonstrated the values of the PTI, empowering all teachers to be advocates for their subject and introducing pupils, regardless of their background or ability, to challenging and enriching educational experiences.

To see summaries of all our completed research projects, visit www.ptieducation.org.

2019

The journey

The PTI

A broad and rigorous curriculum
Wider learning opportunities for students
Teacher subject knowledge
Collaboration and partnerships



Early Career

NEW TEACHER SUBJECT DAYS

Confidence boosting

- Learning from experienced teachers
- Creating and testing original teaching resources
- Sharing outcomes and resources with colleagues



Established Teacher

CPD SUBJECT DAYS AND ONLINE COURSES

Subject inspiration

- Applying new subject knowledge in the classroom
- Hearing from experts in the field

SUBJECT LEADERSHIP CERTIFICATE

Personal accreditation recognising ambitious subject curriculum design



Middle Leader

SUBJECT LEADERSHIP PROGRAMME

Research and collaboration

- Ambition, challenge and depth for all
- Action-based research
- Sharing progress with other members

PRIMARY HUBS

Bespoke professional development for groups of local schools to strengthen subject teaching and leadership



Senior Leader and beyond

SCHOOL LEADERSHIP PROGRAMME

Whole-school focus

- Multi-year projects with whole-school focus
- Long-term strategic view
- Collaborative national network

LEADERSHIP CPD DAYS

Centred around themes such as ethos, curriculum development and leading teaching and learning

New Teacher Subject Days

"It was great to be able to have access to ideas and teaching from people at the top of their field!"



CPD Subject Days

"This has to be the best immersive English CPD I've EVER attended. And I've been teaching 24 years! Incredibly useful. All speakers were so useful and informative in a very supportive environment."



2018/19 Highlights of our year

Subject Leadership Programme

"For delegates, I genuinely believe nothing beats the quality of CPD offered by the PTI. It's a chance to re-engage with your subject and it reminds you of the value and power of teaching excellent lessons, led by up to date and academically rigorous knowledge."



School Leadership Programme

"The aims and content were just right and very refreshing. The speakers were excellent and have given lots of pause for thought. The mixture of school and wider speakers was very engaging."



The Bernice McCabe Award

Bernice McCabe OBE, who sadly passed away in February 2019, was the founding Co-Director of the PTI and believed in the transformative power of inspiring subject teaching. This award has been created to remember Bernice and to promote and celebrate excellence in subject leadership in schools. The Bernice McCabe Award will be awarded annually to an exceptional PTI member department.

The Bernice McCabe Award 2020 was awarded to the Music Department at Mounts Bay Academy, Penzance. Mounts Bay's composition results had always been much lower than performance. The department wanted to provide an authentic audience for student compositions and introduce healthy competition between pupils to improve the quality of songs they composed. They did this by creating a school record label.

This inclusive, outward-looking department have combined musicianship and participation in an experience that benefits young people, the school and the community of Penzance. They are a fine example of how teachers' deep-rooted love of subject can affect a whole community.



2020

The Bernice McCabe Award

Ten departments across the country were shortlisted for the inaugural Bernice McCabe Award. Seven schools were commended, two highly commended and Mounts Bay Academy was announced as the winner. Read about why each school was nominated in this Yearbook.

Mounts Bay Academy <i>Winner</i>	Developing a school record label to raise outcomes in Key Stage 4 composition
Duke's Secondary School <i>Highly commended</i>	Enriching the curriculum to improve boys' enthusiasm towards writing
Robert Clack School <i>Highly commended</i>	Making MFL relevant and accessible to all pupils
Avonbourne Girls' Academy <i>Commended</i>	Using Mastery to drive creative engagement within subjects
Lancaster Royal Grammar School <i>Commended</i>	Using field work and debate as tools to improve historical thinking
Launceston College <i>Commended</i>	Developing a growth mindset in Maths
Oakwood Park Grammar School <i>Commended</i>	Using literary texts to enhance understanding of English grammar
St Angela's Ursuline School <i>Commended</i>	Developing the cultural capital of students
St Angela's Ursuline School <i>Commended</i>	Using deep subject knowledge to inspire practical work in GCSE Science
Upton Hall School FCJ <i>Commended</i>	Developing clear formulation and expression of ideas in History

The Bernice McCabe Award | **Winner**

Developing a school record label to raise outcomes in Key Stage 4 composition

The Music Department at Mounts Bay Academy consistently radiate the values of the PTI through their activities. This is how:

Develop a challenging, innovative and enriching curriculum

Students follow a skills based curriculum, perform their compositions to audiences and record them through the school record label. They are taught industry standard software and hardware from Year 7. This allows those with no previous musical experience to compose freely and creatively without the constraints of music theory.

Enthuse pupils through subject-based activities beyond the curriculum

There are a wide variety of activities on offer, including Taiko drumming, choirs, big band and the tech team. Performances take place at music festivals, on radio stations and in venues across Europe. The school's next record label tour is hugely over-subscribed and the label has become an integral part of school life: art students design album artwork, business students work out potential profits and dance students perform to the tracks. Mounts Bay is a Musical Futures Tech Champion school and has been invited to attend workshops and perform at Spirit Recording Studios. Workshop themes have included 'live sound' and 'careers within the music industry'. The school's next performance is at The Oval in London.

Enrich the subject knowledge and impact of all teachers within the department

The faculty leader is part of the Cornwall Music Education Hub advisory team and she is using this to build further aspirational links. A new teacher joined the department who was supported and trained in teaching Music Technology at Key Stage 3 and Level 2 and has helped to create a new five year plan for Music. He attends local Music Hub meetings and runs his own extra-curricular activities.

Encourage links within and beyond school, including universities and professional bodies

Mounts Bay works closely with DbS Music Plymouth, Falmouth University and Carn to Cove – a charity which gives students access to workshops with professional musicians. The record label has built links with the Music Expo, including being invited to be their keynote speaker. The school is working with Ableton and Spirit Studios to offer clear progression pathways to young people. They have also been gifted software and hardware for their students to use. In addition, they work with FE and HE education establishments and are looking to offer Level 3 Music Performance and Music Technology with a focus on composition, songwriting and producing. The department now wants to build relationships with other schools for collective workshops and exchange programmes.

Contact | Claire Brown cbrown@mountsbay.org

The Bernice McCabe Award | **Highly commended**

Enriching the curriculum to improve boys' enthusiasm towards writing

| Duke's Secondary School, Northumberland |

The challenge | School budget cuts meant that the department could no longer offer subsidised trips to a community in challenging social conditions. Many creative opportunities within the curriculum had already been implemented but extra-curricular opportunities were limited.

The English Department at Duke's were highly commended for the BMC Award due to a 'can-do' attitude creating extra-curricular opportunities with very little budget. Here's how they did it:

Develop a challenging, innovative and enriching curriculum

A three-tier Key Stage 3 curriculum was introduced to enrich and challenge across the ability range. For example, core texts in the 'war and persecution' topic are *The Crucible*, *Heroes* or *The Boy in the Striped Pyjamas* depending on whether a student is on the green, blue or yellow pathway. Much better engagement was achieved with this new system.

Enthuse pupils through subject-based activities beyond the curriculum

Free opportunities were sought out and students visited local museums, cinemas and theatres to enhance their learning and develop their passion for English. They also experienced talks from illustrators and authors, motivational speakers and performance poets.

Enrich the subject knowledge and impact of all teachers within the department

More time to collaborate and share expertise was prioritised. The team were encouraged to share good practice in faculty meetings which has had really positive feedback.

Encourage links within and beyond school, including universities and professional bodies

LiveTheatre worked with groups of students to develop their passion for story-telling, and LoveFilm provided the school with a range of resources and opportunities. Students entered YoungWriters competitions and three students were chosen to be published.

Contact | Emma Wardle emma.wardle@dukes.ncea.org.uk

The Bernice McCabe Award | **Highly commended**

Making MFL relevant and accessible to all pupils

| Robert Clack School, Dagenham |

The challenge | Many students at the school are from culturally diverse backgrounds, however White British students consistently underperformed.

The MFL Department at Robert Clack were highly commended for the BMC Award due to their success generating greater student engagement with the study of Modern Languages. Here's how they did it:

The method | Year 1: Lessons were designed to be more engaging and relevant with units on World Cup football, music, films and current affairs. Students took more ownership of their learning. At the end of the year there was a much higher uptake than in previous years – three groups of Spanish compared to just one the year before.

Year 2: The focus for this year was to encourage students to research and find authentic material to be used within lessons in an attempt to demonstrate that a foreign language is accessible to all, regardless of ability level or lack of prior exposure.

Year 3: A pen pal scheme was established with a French school in Paris. The MFL Department made a display of all the teachers within the school who spoke more than one language. Three cultural trips within London were arranged - two to the Europa Centre and one to the Institut Français.

THE IMPACT

- **Higher engagement levels amongst students**
- **Students achieving higher grades at a faster pace**
- **More flexibility within the curriculum**
- **Students taking ownership of their own learning**
- **A higher number of students being on target or above target**
- **An increased uptake at Key Stage 4**
- **Boys outperformed girls in all year groups at Key Stage 3**
- **Improved performance by SEND pupils**

Reflections | This is the first year that Languages have been made non-compulsory at GCSE at Robert Clack School, and nearly half the year group opted to take a language.

Contact | Emma Allen

The Bernice McCabe Award | **Commended**

Using field work and debate as tools to improve historical thinking

| Lancaster Royal Grammar School, Lancaster |

The challenge | To enable students to learn to become evidence-led in reaching conclusions, to think critically and with a consideration of context i.e. to “think historically”.

The History Department at LRGS were commended for the BMC Award due to their exciting and refreshing redesign of the curriculum. Here's how they did it:

Develop a challenging, innovative and enriching curriculum

The local historical environment was used as a basis for fieldwork. The timing of Israel/Palestine at Key Stage 3 was aligned with the school taking part in the Erasmus Programme. Challenge was provided to students in debate and through the digital resources produced which are now free to all schools.

Enthuse pupils through subject-based activities beyond the curriculum

A long-standing History Society thrived and an Archives Club was created. Students were taken on field trips to Ireland and France; Lancaster Royal Grammar School are lead school on the Parallel Histories Erasmus+ project in the UK, Ireland and France (www.parallelhistories.org.uk).

Enrich the subject knowledge and impact of all teachers within the department

The teachers gained knowledge of how to communicate, pitch and run sessions with students with diverse backgrounds. The Parallel Histories Project involved communications with faith leaders and communities as well as the press.

Encourage links within and beyond school, including universities and professional bodies

The “Contested Memories of Conflict” fieldwork in Ireland led to strong links with the historians who participated. A similar process led to a close relationship with Lancaster University. Lancaster Royal Grammar School are lead school for the Historical Association Young Quills project in the North West.

Contact | Hugh Castle hcastle@lrgs.org.uk

The Bernice McCabe Award | **Commended**

Using deep subject knowledge to inspire practical work in GCSE Science

| St Angela's Ursuline School, Forest Gate |

The challenge | The girls tended to see practical work as an added extra in Science and not at the core of the subject, so they were not motivated to improve their skills in this area.

The Science Department at St Angela's were commended for the BMC Award due to the evidence-based and action research approach they adopted. Here's how they did it:

Develop a challenging, innovative and enriching curriculum

Learning was enriched by looking at great moments in the history of Science, such as the way in which Rutherford probed the structure of the atom and the conclusions he was able to draw. For many of the younger girls, this has led to a project looking at 'living scientists' and what they do.

Enthuse pupils through subject-based activities beyond the curriculum

A school Science Fair was run by Year 9 for the whole school. The girls took their own ideas and carried out risk assessments. The experiments ranged from how hair products affect the breaking stress of hair to studying the placebo effect of non-caffeinated drinks on reaction time.

Enrich the subject knowledge and impact of all teachers within the department

To help the staff deal with the greater challenge within the curriculum, subject specialists within the department delivered training on practical work and produced a 'tech guide.' Training for technicians was delivered through the school science service, CLEAPSS, which nicely complemented trips made by the technicians to other schools to share good practice.

Encourage links within and beyond school, including universities and professional bodies

The school worked with King's College London through the CASE programme (cognitive acceleration through Science education). The Society of Biology, the Royal Society of Chemistry and the Institute of Physics have all provided excellent materials to help the department grow in terms of subject knowledge and practical skills.

Contact | Danny Clift daniel.clift@stangelas-ursuline.co.uk



The Bernice McCabe Award | **Commended**

Using literary texts to enhance understanding of English grammar

| Oakwood Park Grammar School, Kent |

The challenge | OPGS was rated 'Outstanding' but subsequently the results had dropped in English and up-take at A level decreased. In the most recent Ofsted in 2019 the school was rated as 'Good'.

The English Department at OPGS were commended for the BMC Award due to the strong, coherent changes made to the curriculum and the focus on student engagement. Here's how they did it:

Develop a challenging, innovative and enriching curriculum

Students have a dedicated 'literacy lesson' in which purposeful reading activities are encouraged to help bridge the gap between reading and writing. They are taught a nineteenth century novel prior to GCSE, as well as a different Shakespeare play for every year.

Enthuse pupils through subject-based activities beyond the curriculum

Contemporary connections are made between set texts and societal issues, so students become passionate about the key themes, big ideas and characters created as a mouthpiece for something more symbolic. For example, when studying *An Inspector Calls*, attention is drawn to the similarities to modern day political speeches and movements.

Enrich the subject knowledge and impact of all teachers within the department

A new Year 9 curriculum was devised, removing the GCSE texts and allowing for more freedom and creativity. For example, one 6 week scheme of work explores 'Writing to Present a Viewpoint' and looks at sports journalism, political speeches and environmental issues in news reports. Students analyse texts such as David Attenborough's address at the UN Climate Conference in 2019, and go on to write their own by applying the same techniques.

Encourage links within and beyond school, including universities and professional bodies

Students entered a national poetry competition in order to write about genocide, discrimination and the importance of remembering. They were pushed to use the grammatical and structural features of poetry to get their message across in a meaningful way. Oakwood Park won the School Prize, joint Second and Third Prize and 2 x Highly Commended prizes.

Contact | Maria Goodhew mgoodhew@opgs.org

The Bernice McCabe Award | **Commended**

Developing a growth mindset in Maths

| Launceston College, Cornwall |

The challenge | To impact the progress of lower achieving students and improve their attitude towards Maths.

The Maths Department at Launceston College were commended for the BMC Award due to their success engaging students and staff into furthering their subject knowledge. Here's how they did it:

Develop a challenging, innovative and enriching curriculum

A problem-solving approach was introduced and Diamond 9 classroom rules were created. Lessons became a space to think about Mathematics visually and students were taught that thinking deeply is better than speed and making mistakes is important.

Enthuse pupils through subject-based activities beyond the curriculum

Students participated in enrichment events such as 'maths4real' theatre trips, The Met Office - 'Maths Feast' competitions and Level 3 encouragement events at Plymouth and Exeter University.

Enrich the subject knowledge and impact of all teachers within the department

The Maths department completed mindset CPD sessions at the beginning of the project alongside a questionnaire at the beginning and end of the programme. Last year, the entire faculty showed a growth mindset in intelligence. Teachers have also engaged in furthering their education at Plymouth University through Master's and PhD qualifications.

Encourage links within and beyond school, including universities and professional bodies

Developing further links with transition primary schools, Launceston College invited students for problem-solving days to help develop a growth mindset before secondary school. Links have also been made with another school, demonstrating growth mindset with their trainee teacher. This is now being shared in her school.

Contact | Lucy Whitehouse stflew@launcestoncollege.org.uk



The Bernice McCabe Award | **Commended**

Using Mastery to drive creative engagement within subjects

| Avonbourne Girls' Academy, Bournemouth |

The challenge | To ensure creativity resonates in all subjects to improve the confidence and prospects of students from challenging social contexts.

The Art Department at Avonbourne were commended for the BMC Award due to the inclusivity of their Mastery approach. Here's how they did it:

Develop a challenging, innovative and enriching curriculum

Time was spent mentoring individual students as part of the Mastery initiative which helped to build confidence and improve outcomes. Lunchtime, after school, weekend and holiday clubs built upon these skills and pupils valued this. 100% of Key Stage 4 students became regular attendees at lunchtime and after school clubs, initiated because of the focus on Mastery.

Enthuse pupils through subject-based activities beyond the curriculum

Events such as 'The Creativity Awards Evening' helped to engage and convince parents of the value of the creative subjects. It also rewarded creative approaches to learning in every area of the school. Entertainment and food for 300 parents and students was accompanied by performances and prize giving.

Enrich the subject knowledge and impact of all teachers within the department

All staff in the department were involved in internal and whole school CPD and the delivery of research-based presentations. These are archived in a shared staff online area. Staff are also members of SUN and SCENT networks of teachers and lecturers.

Encouraged links within and beyond school, including universities and professional bodies

The school's success on a national platform (exhibited at the National Students' Art Exhibition, representation at the regional heats of the 'Articulation' public speaking competition) and internal exhibitions ensure students are in no doubt of their abilities and potential. Arts University and New Arts Centre workshops, visits and talks were also arranged.

Contact | Jane Davies jane.davies@avonbourneacademy.org.uk

The Bernice McCabe Award | **Commended**

Developing clear formulation and expression of ideas in History

| Upton Hall School, Wirral |

The challenge | There was a whole school initiative for pupils to find their “voices”. Following the removal of Government & Politics as an A level option, the department sought to raise political awareness to help develop expression of ideas.

The History Department at Upton Hall were commended for the BMC Award due to their success reviewing the entire curriculum to ensure that it is enquiry-based. Here’s how they did it:

The method | A range of initiatives were put in place to develop pupils’ skills of argument:

- Enhanced debating skills were developed in ‘Here I Am’ lessons at Key Stage 3 which fed into pedagogy in History lessons
- Enquiry-led lessons were developed at Key Stage 4, providing opportunities for debate
- The use of no-hands-up policies and lesson plans which encouraged debate led pupils to structure their arguments more powerfully
- Pupils participated in debates at Wirral Youth Parliament and the Historical Association Great Debate competition
- The school hosted training for the Anne Frank Trust Ambassador Programme
- A Twitter feed linking historical events to current affairs was started

THE IMPACT | **By the end of the project 20 students opted to take History at A level (compared to 9 at the beginning of the project) and there were 4 classes in Year 10 for the first time (in the last 10 years there have been only 3 classes).**

At Key Stage 5, students have become significantly more confident in articulating ideas. One student was made Young MP for Wirral in 2018 - another is currently Deputy Young MP. Student voice suggested that the Unit 1 at A level had become more interesting and relevant now that current debates were used.

Contact | Sarah Davies

The Bernice McCabe Award | **Commended**

Developing the cultural capital of students

| St Angela’s Ursuline School, Forest Gate |

The challenge | To improve cultural awareness to inspire future linguists.

The MFL Department at St Angela’s were commended for the BMC Award due to their innovative curriculum redesign, ensuring it has relevance to real global issues. Here’s how they did it:

Develop a challenging, innovative and enriching curriculum

Literature, poetry, film and music are used as tools to breathe life into languages. The school library now offers translated versions of well-known books such as Harry Potter to encourage independent reading. In Year 11, the French translation of Greta Thunberg’s environmental book is studied.

Enthuse pupils through subject-based activities beyond the curriculum

Languages Day was celebrated with the entire cohort of Year 7 being dressed in traditional costumes (80% of the school are from West Africa). Students had to find their flags in the canteen and Irish dancing, Afrobeats and flamenco dancing took place. Year 13 run a lunchtime discussion group called “Because I’m a girl” aimed at tackling challenging issues around inequality, racism and sexism in the world.

Enrich the subject knowledge and impact of all teachers within the department

Teachers attended PTI courses which invigorated their approaches to teaching. Lessons were subsequently devised on the French motto, “Equality, Fraternity, Liberty” and the role of female spies in the anti-Nazi war effort.

Encouraged links within and beyond school, including universities and professional bodies

Native speaking teachers forged links with their old friends to set up pen pal links. Exchange programmes and trips enabled pupils to experience another culture. Contexts such as visiting a sweet factory, schools and learning about the conservation of wildlife in the Pyrenees provided real-life meaning to the experiences.

Contact | Frances Suc-Diamond

2019

Completed research projects

Over 270 PTI members are currently conducting action-based research in their schools, reaching more than 130,000 students across the UK and beyond. Below is a list of projects completed this year which are published on our website.

School	Project summary
Abbots Farm Junior School*	To deepen understanding of Maths through high quality feedback
Ashcroft Technology Academy*	Introducing more literacy into the Key Stage 3 French curriculum to encourage a life-long appreciation of language
Bexley Grammar School	Enthusiasing and encouraging boys and low-achieving students in English
Bideford College*	Strengthening middle leadership
Davenant Foundation School	Raising the profile of MFL beyond Key Stage 4
Duke's Secondary School**	Enriching the curriculum to improve boys' enthusiasm towards writing
Gordon's School	Promoting independent learning in English
Gordon's School	Improving problem solving skills in Mathematics
Hinchingsbrooke School	Improving outcomes for disadvantaged students: eliminating the gap
King Edward VI Camp Hill School for Girls	Increasing enthusiasm for Science through extracurricular activities
King Edward VI Camp Hill School for Girls	How can we support and raise the aspirations of the most able disadvantaged students living in Birmingham's designated areas of deprivation?
King Edward VI Five Ways School*	Improving problem solving skills in Mathematics
Launceston College**	Developing a growth mindset in Maths
Lea Valley Primary School*	Future readers

*Project overview included in this Yearbook

**Project appeared in the Bernice McCabe Award section

Monk's Walk Academy	Improving motivation and attainment of underachieving Key Stage 4 boys
Mounts Bay Academy	Improving student engagement with Mathematics
Mounts Bay Academy	Improving performance in Science Required Practical Activities
Oakwood Park Grammar School**	Using literary texts to enhance understanding of English grammar
Oakwood Park Grammar School*	Stretching and challenging high achieving students in Geography
Poole Grammar School	Developing student voice as a way of improving outcomes
Queen Elizabeth's School	Enriching Maths schemes of work to include stretch and challenge
Queen Elizabeth's School	Developing a cross curricular approach to Science projects with a vertical tutoring approach
Rainham Mark Grammar School*	Establishing a STEM training centre
Robert Clack School	Does implementing extra-curricular activities change students' perceptions of Science and uptake at Key Stage 5 and beyond
Robert Clack School**	Making MFL relevant and accessible to all pupils
Robert Clack School*	Developing algebraic and multiplicative reasoning
St Angela's Ursuline School**	Using deep subject knowledge to inspire practical work in GCSE Science
St Bonaventure's RC School	Using extracurricular lectures to develop writing, research and oracy skills
The Henrietta Barnett School*	Promoting wider reading in Science
The John Warner School	Values-led school improvement across a multi-academy trust
Upton Hall School FCJ**	Developing clear formulation and expression of ideas in History
Wyton on the Hill Primary School*	Building success in Science
Ysgol Rhiwabon	Improving higher ability boys' attainment in Science

Project highlights

Leadership

Establishing a STEM training centre

| Rainham Mark Grammar School, Kent |

The challenge | Teachers in Kent and Medway did not receive sufficient CPD in STEM subjects and there was a need for schools to engage with each other to share good practice.

The method | To establish a training centre for professional development in Science and improve the STEM experience of students, with a focus on girls. The following initiatives were set up:

- Numerous STEM events took place, including visiting speakers, competitions, careers fairs and a 'STEM at work' event for Year 9 students at a local university
- Students were entered for CREST awards and various clubs were set up
- A primary network was successfully launched to support primary teaching
- A successful bid to become the lead school for the South East Science Learning Partnership led to funding to deliver CPD for local teachers, working with Canterbury Christchurch University
- The IoP Gender Equality Programme was successfully implemented
- Year 13 students were trained as STEM ambassadors to support outreach work
- Four members of the department completed national STEM CPD Facilitator training

THE IMPACT | A significant number of high-quality Science training days have been delivered, including four large conferences and numerous networking events. Student and teacher surveys all highlighted the positive impact increased STEM activities and high-quality CPD have had on developing staff. Retention and recruitment of Science staff has also improved.

Contact | Kevin Frost kfrost@rmgs.org.uk

Strengthening middle leadership

| Bideford College, Devon |

The challenge | The Ofsted inspection in March 2015 said the key priority was for students to make greater progress. To help achieve this it was suggested that the school 'improve the quality of leadership and management'.

The method | Bideford College adopted three leadership development pathways in collaboration with other schools in the MAT. One pathway was specifically to promote outstanding teaching. Participants were asked to share their work in twilight CPD sessions, which created something of a 'buzz'. The status of the programme caused interest, and in over half of cases led to promotions within the college or MAT. The culture of CPD shifted and there was a more aspirational definition of staff development. A parallel programme for senior leaders has strengthened their sense of shared ethos and common purpose, and good practice is now shared with a wider group of schools across the MAT.

THE IMPACT | The programmes have grown in popularity each year, and a place on these is an aspiration for those seeking additional responsibilities. In a subsequent Ofsted inspection, the report noted that "Middle leaders are ambitious and highly skilled. They have a clear understanding of the improvements that need to be made." They also noted, "Middle leaders are developing the curriculum quickly in their subject areas. This is leading to rapid improvement in the quality of teaching". The programme had a halo effect that brought others along, creating a benchmark for others in terms of defining professional standards and asserting an ethos.

Contact | Dr Bruce Butt bbutt@bidefordcollege.org

Find all the projects online:

www.ptieducation.org/what-we-do/schools-programme/member-projects

Mathematics

Developing algebraic and multiplicative reasoning

| Robert Clack School, Dagenham |

The challenge | To use ICCAMS (Increasing Confidence and Competence in Algebraic and Multiplicative Reasoning) to develop students' mathematical skills.

The method | Two teachers attended professional development days (10 days spread across the project) to learn about the ICCAMS materials. The strength of the materials was in seeing the conceptual links between the lessons and the wider curriculum. Cascade sessions were delivered during departmental meetings. The teachers reported improved engagement in the classroom and students found the lessons challenging yet accessible. Lessons were fully embedded into the Year 7 & 8 schemes of work.

THE IMPACT | Year 8 questionnaire results predominantly showed that students felt that ICCAMS lessons made them think, were different from their usual lessons and that generally they learnt from the lessons. Students agreed that they like to discuss ideas and to be challenged; areas that teachers agreed were a strength of these lessons. A key success came from opening up lessons for colleagues to observe and discuss, so these will be a feature in coming years.

Contact | Jacqueline Mann jmann@robertclack.co.uk

Improving problem solving skills in Mathematics

| King Edward VI Five Ways School, Birmingham |

The challenge | Many students, whilst able mathematicians, struggled when asked more ambiguous or 'problem solving' style questions. Since this was to be the content of questions in the new GCSE, more focus was required to ensure students were well prepared.

The method | Staff regularly used a variety of problem solving activities in lessons and shared their resources. These included the 'White Rose' differentiated questions, NRICH, 1000problems and Median by Don Steward. They also encouraged problem solving outside of the classroom by promoting entry into the weekly puzzle from puzzleoftheweek.com. The school regularly featured in the top 40 schools worldwide for weekly puzzles.

THE IMPACT | Student confidence increased through regular focus on problem solving methods in class, as well as their verbal explanations. Students liked that they were not just doing the same skill ten times and enjoyed the variety of moving from a topic on number, to an area problem, to a problem that could be solved using algebra.

Contact | Victoria Baker vbaker@kefw.org

Geography

Stretching and challenging high achieving students in Geography

| Oakwood Park Grammar School, Kent |

The challenge | Students could choose only 3 A level subjects and the higher ability students often chose STEM subjects.

The method | To increase attainment in all years and to raise the take up of Geography at A level:

- Schemes of work were updated to include contemporary and more challenging topics
- Dedicated Improvement and Reflection Time (DIRT) and Mastery techniques were used to address misconceptions
- Geography club debated topics such as the Windrush generation, Fairtrade and WaterAid
- More challenging material was made available for G&T students from e.g. New Scientist and The Economist
- Cross-curricular links were made with the Maths department and statistical techniques were used

THE IMPACT | Out of 180 students, 140 Year 8s chose to study Geography at GCSE. Student uptake at A level is good with 41 students in Year 13 and 35 students in Year 12. Overall, staff and students feel positive about using DIRT and Mastery strategies and see the benefit of using them.

Contact | Keeley Dean kdean@opgs.org

Find all the projects online:

www.ptieducation.org/what-we-do/schools-programme/member-projects

Science

Promoting wider reading in Science

| The Henrietta Barnett School, London |

The challenge | A significant proportion of students apply for competitive courses such as Medicine or Dentistry. Finding ways to draw links between the curriculum and the outside world was essential for the girls to appear at their best during the application process.

The method | Each Science Department developed activities to support this goal:

- In Physics, Year 12 students researched and presented a topic of personal interest linked to Physics
- In Biology, Year 12 students produced a scrapbook in which they summarised and evaluated articles linked to the subject which they found particularly interesting
- In Chemistry, students oversaw the production of HBScientist, the school's Science magazine which was entirely written and edited by Year 12 students
- Wider reading displays were generated in the Science corridors
- The Science teachers recommended fiction and non-fiction books which were put on the library's Amazon Wish List
- In Biology, students were asked to visit an exhibition over the summer holidays and research an aspect they found interesting

THE IMPACT | Encouraging students to share research and reading experiences made not only students but teachers more enthusiastic about their subject and its applications. In the most recent survey, 70% of the students felt they were encouraged by the school to complete wider reading. When asked to break this perception down, students thought that wider reading was useful for university applications (77%) and university interviews (79%).

Contact | Dr Flore Faille ffaille@hbschool.org.uk

Modern Languages

Introducing more literacy into the Key Stage 3 French curriculum to encourage a life-long appreciation of language

| Ashcroft Technology Academy, Putney |

The challenge | To make the curriculum more multi-layered and promote interest in French coinciding with the new GCSE.

The method |

- Verse, rhyme, quotation and songs were introduced to Key Stage 3. Examples included the poem *Le gros chat* and the songs *Quelle est la date de ton anniversaire*, *L'araignée gypsy* and *Quel temps fait-il*
- The European Music Scheme was introduced to Year 10 where students picked a song, recreated new lyrics in the target language, sang the song and made a video of it
- Different text types were introduced to Key Stages 4 and 5 in the form of posters, newspapers, magazines, TV and radio
- Poetry was a key theme including students writing their own poetry
- More importance was accorded to pronunciation of key vowel sounds, silent letters and liaison

THE IMPACT | With the nature of such a project, it was difficult to quantify success in terms of data collecting, since most of the initiatives were built into the schemes of work. More important at the outset was for teachers to source materials relevant to the themes and to create special features within their lesson planning.

Contact | Paulette Kavanagh paulette.kavanagh@ata.org.uk

Find all the projects online:

www.ptieducation.org/what-we-do/schools-programme/member-projects

Primary Leadership

Building success in Science

| Wyton on the Hill Primary School, Huntingdon |

The challenge | Lessons had become too focused on English and Maths: gaps in learning in the core subjects caused by a high level of mobility had taken over teaching and it was time to rebuild the curriculum.

The method | 3 drivers, collectively known as 'Science Capital', were used to drive engagement. These were: Diversification, Personalisation and Localisation.

- An 'extreme Science fortnight' was held in partnership with local scientists
- A range of trips and visits meant pupils experienced Science at work in real-life contexts including pharmaceutical and veterinary medicine
- A home-school learning 'Science Fair' project was created with the help of pupil 'Science Ambassadors'
- Workshops and assemblies were led by a local scientist undertaking research in the Antarctic
- An extra-curricular Science club was introduced, launched by a local theatre group and run by local scientists, with funded places for vulnerable and disadvantaged pupils
- Pupil ambassadors chose to lead a whole school year-long research and conservation project on ladybirds, supported by a guest scientist from Cambridge University
- Science knowledge was taught through storytelling; a published author was invited to lead a series of story-telling events

THE IMPACT | 100% of staff involved in the project are more confident in teaching Science. There is now a mutually shared understanding of what 'Mastery' and 'greater depth' in Science entails and of what progression looks like. Pupil surveys indicate strong engagement and enjoyment and 94% say that they might choose to carry on Science in their secondary and adult lives. The school's Science Leader has developed the expertise to support other local cluster schools.

In addition, the school's bank of Science resources now includes:

- Sustainable links with local scientists
- A calendar of enrichment events
- A fully subscribed Science club
- A well-stocked Science cupboard – achieved by staff and children through a variety of fundraising events, including a sleepover attended by 95 children!

Contact | Sarah Poulton spoulton@wyton.cambs.sch.uk

To deepen understanding of Maths through high quality feedback

| Abbots Farm Junior School, Rugby |

The challenge | To avoid missed opportunities for supporting pupils at the point of learning and improve upon the triple marking policy which was becoming too onerous for staff.

The method | The school marking policy was replaced by a feedback policy, and teachers visited schools who had already successfully implemented this model. This made it clear that more time was spent on planning lessons over marking books. Teachers led explanations with pupils about the new feedback policy and a range of CPD was provided to ensure that teacher feedback was meaningful, motivational and manageable.

THE IMPACT | There was a positive shift in baseline data to the end of Key Stage 2 data and positive evaluations by members of staff, pupils and governors.

Contact | Karl Robinson robinson.k2@welearn365.com

Future readers

| Lea Valley Primary School, Tottenham |

The challenge | To develop a whole school, unique approach to the teaching of reading when children do not have access to rich, high quality books outside of school.

The method | The School Development Plan stated pupils should be engaged in reading for pleasure, visit the library regularly and that all classes have a high quality reading area. The BIG Read and Reading Eggs homework initiatives were introduced throughout the school. Pupils without the internet were invited to homework club to complete their work. All teachers delivered whole class reading sessions.

THE IMPACT | Questionnaires showed that the percentage of pupils who enjoyed reading increased. The library data shows that children are using the library weekly. Children are able to discuss the books they are reading. The biggest success of this project is that other schools in the local authority and beyond have implemented this approach and the teachers come and observe best practice within our school.

Contact | Maria Kokotsis



PTI Primary Hub Case Study

In early 2019, 61 teachers from 15 primary schools belonging to the Harlow Education Trust (HET) co-operative of schools, came together with the PTI to pilot a new way of working together. The intention of the fledgling programme would be to focus on increasing the breadth, quality and progression of subject curriculum and explore aspects of subject leadership in a primary setting.

Three bespoke days of subject immersion and the creation of new learning resources, pedagogical approaches and exploration of curriculum ideas led to something very exciting: a collaborative of professionals inspired by subject engagement who cultivated working practices and expanded the educational experiences of pupils both within and beyond the curriculum.

This pilot laid the foundations for primary teachers across the country working with nearby colleagues to drive and shape approaches to curriculum design and the pedagogy underpinning it: The birth of the PTI Primary Hub.

A key strength is the partnership between the headteachers and the PTI facilitated by the Hub Lead. The Hub determines the priorities pertinent to their context and interests, and the PTI draws on our national network of teachers, speakers and academics, to shape and deliver the days. The HET Hub has so far experienced 5 bespoke CPD days in the following subject areas: English Literature (Shakespeare), Geography (Fieldwork through Attention to Place), History (Migration), English Language (Spoken word, poetry and writing for pleasure) and Science/ STEM (Tinkering: the pleasure of finding things out).



Very engaging and informative - I have tonnes of ideas to take away and share with my colleagues for the whole school!

Primary Hub participant 2019

As a consequence of this work, one school has developed a topic linking the migration of peoples, birds and animals. Another school has started a research project into Writing in Science and links to developing children's cultural capital in relation to Science. A Key Stage 2 project tracing family histories and presenting back to parents provided children with a real audience and celebrated culture and identity. Geography as a lived experience and tinkering methodologies applied to learning in Science have been adopted widely. Shakespeare enrichment days and weeks, active approaches to teaching drama texts and *The Tempest* being taught not only in Year 5, but also in EYFS provided pupils with an exciting and positive early experience to the stories, language and themes of the Bard.

These are just some of the examples which are testament to the commitment of HET Hub members to design and deliver a challenging and enriching educational experience for all children within and beyond the curriculum.

Clare O'Sullivan
Head of Education Strategy and Development
The PTI



An inspirational day! I'm leaving with practical ideas that can be used right away. Thank you!

Primary Hub participant 2019



Looking forward to 2020

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- Raise subject profile
- Develop subject provision

Leadership Residential Courses

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- Develop long-term strategies
- Collaborate with a national network

Subject Leadership Certificate

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- Enhance subject knowledge
- Design and deliver challenging schemes of work

Primary Hubs

- Collaborate with a network of local schools
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- Strengthen subject provision

Find out more www.ptieducation.org/events

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A network for secondary heads, executive heads and SLT to focus on long-term strategies for school improvement

Whole-school leadership of T&L

Primary Leadership Programme

A network for primary heads, executive heads and SLT to focus on long-term strategies for school improvement

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To find out more about pricing for your school, contact:

heidi.mitchell@ptieducation.org



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