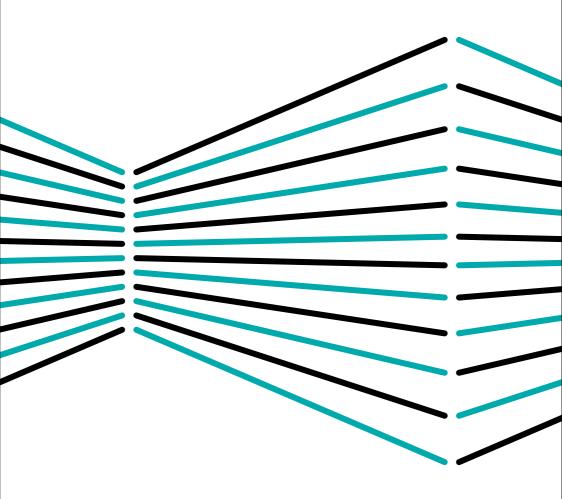
School-University Partnerships

Lessons from the RCUK-funded School-University Partnerships Initiative (SUPI)







Map of the 12 SUPI projects Each SUPI was a partnership-you can find out more about these projects on page 04 MUSE: Models of University and School Engagement Inspiring Lives, Creating Futures ■ School:University **Partnerships** for Research East Anglia Cardiff University Schools Partnership (CUSP) Partnerships Talk to US! Empowering Partnerships Enabling Engagement Southampton

Foreword

Over the last 4 years we have had the privilege of working on the School-University Partnerships Initiative (SUPI), an experiment to see whether it was beneficial for schools and universities to partner together to bring cutting-edge research into the classroom. This booklet captures the results from this experience, and we hope it will inspire others to think hard about the opportunities presented by school-university partnerships, and how they can be realised.

The SUPI project has provided a rich place to learn about the dynamics of effective partnership working, and a reminder that partnership working is both demanding and hugely rewarding. It has opened up new ways of thinking about partnership working between schools, colleges and universities, captured key insights into what helps and hinders, and has seen the development of really innovative and inspiring projects.

There were lots of highlights from over the 4 years – but I want to reflect on one – and that is how many of the SUPI partnerships sought to involve school students in authentic research, for instance through the Extended Project Qualification for A-level students. This commitment to experimenting with 'real' research was a platform for really creative partnership working between researchers, teachers and students. We hope that others will be inspired to explore this opportunity too.

To realise the potential of schooluniversity partnerships, we need to see a change in how schools and universities approach this type of working, investing time and resource into long term partnerships that have mutual benefit at their heart. It has been heartening to see the teams involved in the SUPI project begin to address this challenge.

We want to thank the SUPI teams for sharing their journeys with us, their commitment to collaborating across the family of projects to help share learning, tackle challenges, and evidence value. In addition we want to thank our external advisory group, for their insights and wisdom, and support for the programme.

Sophie Duncan, NCCPE September 2017

SUPI in numbers

12 SUPI projects 600 schools and colleges engaged

900 engagement activities and opportunities offered

1,800 university staff trained

2,000 university staff involved

in engagement activities

students engaged

3,600 teachers engaged

40,00+
school and college

Please note: these are approximate figures which have been calculated using data provided by the SUPI project teams. In some cases only partial data are available hence overall totals in all areas are likely to be significantly higher.

Introduction

How can teachers and university researchers work together to bring cutting-edge research into the classroom? Research Councils UK (RCUK) are committed to engaging young people with research and wanted to find effective ways to do this in a sustained way. In 2013 they initiated the Schools-University Partnerships Initiative (SUPI). Following a competitive awards process 12 partnership projects, involving universities working with local schools, were tasked with developing long-term school-university partnerships that made a difference to school students. teachers, researchers, and research. Over four years the programme benefited from £2.4 million RCUK funding and this investment was matched by actual and in-kind contributions from the universities and schools involved.

Whilst each SUPI project developed a bespoke approach, sensitive to contextual factors, they shared four key aims:

- to inspire the next generation by bringing research into formal and informal learning contexts;
- to reach secondary school students from a diversity of backgrounds and abilities;

- to provide researchers with opportunities and training to engage with secondary school students:
- to support secondary schools and higher education institutes to work together to create structured, strategic, sustainable and equitable mechanisms for school-university engagement.

The National Co-ordinating Centre for Public Engagement (NCCPE) was appointed to co-ordinate the SUPI network, providing support for the projects and drawing together learning from across the programme. This booklet distils the key lessons from the project for each of these four aims, alongside relevant snapshot case studies from the 12 SUPI projects. We hope it will enable universities and schools to initiate, enhance and develop their approach to long-term school-university partnerships.

We hope you'll be inspired to find out more! Look out for this symbol , which signals a resource link or case study available at www.publicengagement.ac.uk/

www.publicengagement.ac.uk/ SUPI-lessons

The 12 SUPI projects



SusNet

Aberystwyth University

- Authentic: A blended-learning approach offered sixth form students a taste of university study
- Inclusive: Bilingual engagement opportunities across a range of subjects, not just for high-flyers
- Rural: Aberystwyth's unique coastalrural location presented particular challenges... and opportunities



Schools Partnerships Initiative University of Bristol

- Multi-stranded: Encompassing curriculum support for teachers, EPQ mentoring, and research-based workshops
- Exploratory: Supporting school and researcher-led projects in response to demand
- Cascaded: Developing activities
 with subject leads and partner
 schools, which could then be shared
 with other local schools



Cardiff University Schools Partnership (CUSP)

Cardiff University

- Infrastructure-focused: Developed a co-ordinating infrastructure to support schools engagement across the entire university
- Collaborative: Ensured all activities were informed by and piloted with teachers
- Inspiring: Offered opportunities for any school at any level and researchers in any discipline, to make a difference to Welsh education



Empowering Partnerships, Enabling Engagement University of Exeter

- Cross-disciplinary: Offered opportunities for students to understand better how real world challenges are addressed by researchers from across a wide range of subjects
- Experimental: Explored innovative ways to support pupils to get involved
- Evaluative: Made effective use of evaluation to ensure that approaches were relevant to teachers and students

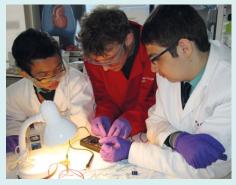
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The 12 SUPI projects



School:University Partnerships for Research University of East Anglia

- Research-focused: Explored how students made sense of research and could be encouraged to be researchers
- Connective: Worked with different partner organisations to widen and enrich provision and developed new initiatives such as the Youth STEMM Award
- Collaborative: Forged connections between schools and university departments, resulting in inspirational activities such as a live link up with Major Tim Peake at the International Space Station



Reaching Further Imperial College London

- Co-developed: Practical lessons developed in collaboration between researchers and teachers
- Innovative: Translated cutting-edge research in biomechanics, computing, and beyond, into the classroom
- Integrated: Built on the widening participation work of the university to enhance its offer and involve more researchers



Inspiring the Next Generation of UK Researchers

Lancaster University

- Co-created: This approach was integral at all stages of the project, leading to resources and activities that met the needs of all
- Rural: The dispersal of schools across a wide geographic area led to the development of Research in a Box-a set of curriculum related activities for schools linked to the diverse range of research at the university
- Scalable: Offered a modular approach which enabled others to join in, and created new ideas and resources to support engagement



School-University Partnership Initiative

The University of Manchester

- Advocating: Led by example with teachers nominated as 'Research Champions' to support school engagement with research
- Collaborative: Created opportunities for teachers and researchers to work together through a networking fair and seed-corn funding scheme
- Diversity-focused: Informed by the University's Widening Participation work

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The 12 SUPI projects



Engaging Opportunities: Connecting Young People with Contemporary Research and Researchers

The Open University/Denbigh Teaching School Alliance (OU/DTSA)

- Flexible: Developed an adaptable framework of four types of activity open lectures, open dialogues, open inquiry, and open creativity which enabled working across a variety of disciplines and school-subject areas
- Empowering: Committed to a pupil-centred approach
- Open: Dedicated to sharing ideas and activities—whether through the Engaging Opportunities blog or a live webcast of the Science Matters lectures



Inspiring Lives, Creating Futures Queen's University, Belfast

- Cross-disciplinary: Adopted a theme-based approach to schooluniversity partnership working
- Creative: Developed innovative workshop activities that engaged Year 9 and 10 school students with real world issues
- Connecting: Worked with Area Learning Communities to bring students from different schools together to learn and share



Talk to US! University of Southampton

- Dialogue-focused: Placed two-way communication between the university and schools at the heart of its approach
- Understanding: Developed the 'Building School-University Partnerships Guide Book' to overcome some of the barriers and misconceptions that can stop universities and schools from working together effectively
- Open: Offered an opportunity for schools to approach the university and get involved on their own terms



MUSE: Models of University and School Engagement University of Strathclyde

- Pioneering: Created brand-new relationships with schools with a focus on mentoring and raising school students' aspirations
- Thoughtful: Considered how students might be supported over several years, rather than one off interventions
- Creative: Bringing the best of arts-science collaborations to inspire school students and researchers

Lessons learned about...

Inspiring the next generation about research

Research means to keep looking for answers even if you think you have found them all."

School student

Key learning points

Working together to develop resources and materials is a key principle. Co-creation involves people at all stages of the process, ensuring that the materials are relevant, fit for purpose, and benefit from the expertise of all those involved, as well as providing learning and development opportunities.

Don't underestimate interest, enthusiasm, or ability. School students are more than capable of contributing to authentic research, if they are suitably trained and supported.

With increasing pressure to focus on the core curriculum during lessons, several projects found that lunchtime and after school clubs provided opportunities to engage through extra-curricular activities.

Alternatively, look for areas of best fit between the needs of schools and the research expertise of universities. The Extended Project Qualification (EPQ), which enables sixth form students to plan, research, and develop a self-directed project, proved a good match: a number of SUPI projects developed resources, mechanisms and support for EPQs and the Welsh Baccalaureate in Wales.

Consider the use of technology. Whilst face to face encounters are invaluable, technology can also help, particularly when geography is an issue.

Don't forget about the teachers! Many of the SUPI projects introduced Continuing Professional Development and Subject Knowledge Enhancement sessions for teachers, introducing them to the pioneering research taking place at the university.

Realising SUPI Aim One: Inspiring the next generation through bringing contemporary research into formal and informal learning contexts to enhance the curriculum and raise ambition.

Inspiring the next generation about research

Authentic research that inspires school students

For UEA creating authentic research opportunities for school students was a key focus. For example, the project instigated a year-long project investigating the DNA barcoding of lichen species in Norfolk. The students were trained on the equipment and techniques at UEA, but conducted the actual research in schools. They later published a paper on their work in the British Lichenology Society Magazine.

Strathclyde developed an oral history project which supported young people to research and understand their local history, generated data for university researchers, and encouraged the local community to pursue new historical restoration. The school students presented their research at the official launch of the Springburn Winter Gardens Trust and the project received commendation in the Scottish Parliament.

The most important positive outcomes were for the pupils involved. These were wide-ranging and not anticipated fully at the beginning of the project. Their confidence improved visibly, an aspect recognised by teaching staff at the school."

Researcher

Strathclyde: Asteroids event



Engaging school students in formal and informal learning contexts

Southampton supported the 'Dragonfly Day' initiative, creating the opportunity for Year 9 female school students to work with female engineers from the Faculty of Engineering and the Environment to conduct practical investigations and experiments during an on-campus day. This resulted in increased interest in science and engineering careers.

I was surprised by how big it all is! All the different jobs and subjects that there are in the world."

School student

Mullion School's lunchtime biological science-based club, EcoSoc, provided an opportunity for scientists from Exeter University to talk about their work and test their ideas. Covering diverse topics, from turtle conservation in the Mediterranean to how to run an expedition to Borneo, EcoSoc provided inspiration for school students and researchers alike. This led to a successful Royal Society Partnership Grant project, in which a researcher, a teacher and school students worked together to develop a research project investigating bird intelligence.

The school students
experienced the excitement
of discovery, gained a deep
understanding of the extraordinary
creatures on their doorsteps and
developed knowledge of concepts
and methods in evolutionary biology
and psychology. Most of all, they
learnt that science is fun!"

Teacher

Southampton: Dragonfly Day



Inspiring the next generation about research

Creating activities together

Lancaster's Research in a Box scheme offers loanable equipment and virtual resources to introduce GCSE and A-level students to the world of cutting-edge research in different subject areas. The boxes are co-developed by researchers and teachers, and tested by students, covering a diverse range of topics, from parasites to radicalisation.

That was brill; can we do it again next week?"

School student

Makes me want to have a research career instead of my current job."

Biology teacher

Imperial supported researchers to develop classroom sessions based upon cutting-edge research, with input and advice from teachers. This resulted in activities that were accessible, engaging, and where possible curriculum-linked.

We were able to pitch our activity to teachers and receive feedback... Perhaps the most important advice we received here was that we should not expect everything to go as planned, and that we needed to be flexible and spontaneous and allow the activity to change and reinvent itself during a session depending on how the children reacted."

Researcher

Using different tools and technologies to support engagement

Aberystwyth offered a range of exciting, research-led academic modules across a range of disciplines, which combined face-to-face and online learning activities delivered through the University's virtual learning environment (VLE), Blackboard.

Pupils have been able to use lab equipment that is not available in school; they have gained a taste of university study... they have been able to try courses beyond the subjects on offer in school and in several cases have realised that university study is not beyond their reach."

The OU/DTSA partnership used a live 'labcast' to bring cutting-edge science into the classroom. The Milton Keynes-based project used an interactive web broadcast from a university research laboratory to engage a classroom of A-level Physics students. This activity provided opportunities for students to engage directly with a space scientist working on the Rosetta Mission to explore Comet 67P/Churyumov-Gerasimenko.

The organisers of the Labcast, researchers working with teachers, have written up this activity for publication. The paper includes a review of the planning framework and evidence from the evaluation.

Lancaster: Year 12 Biology students from Dallam School using Research in a Box.



OU/DTSA: Professor David Rothery from the OU delivers a lecture for schools in Milton Keynes.



Connecting teachers with contemporary research

Manchester introduced a STEM
Teacher Conference, which updates
teachers on the latest research
being conducted at the university
and supports them to think about
how they could bring some of this
knowledge back into their classrooms,
in addition to creating networking
opportunities for researchers
and teachers.

In collaboration with the Cutting Edge Science programme, organised by the National STEM Learning Centre and Network, Strathclyde organised an interactive one-day course for teachers and Year 11 students of physics that explored asteroid detection and deflection. The day included research-led talks, practical activities and a tour of the university Engineering department.

The chance to let future engineers see how what they study now in school can be practically applied in a variety of engineering roles was a fantastic way to promote STEM subjects and inspire a new generation to take physics at a higher education level."

Researcher

Bristol developed Subject Knowledge Enhancement workshops on themes as diverse as atmospheric chemistry and Elizabethan England to support the school curricula. One involved an English teacher and researcher in nineteenth-century literature collaborating on a twilight session designed to support the new GCSE requirement to teach Romantic poetry.

Having an expert who really knew this period well inspired a desire in me to delve deeper into research/contextual information which will inform my own pedagogy."

Teacher

Manchester: Teachers and staff networking around posters at a Celebration Evening.



Supporting the Extended Project Qualification (EPQ)

The EPQ is a qualification equivalent to half an A-level, which involves conducting an independent research project. Responding to school demand and the need to develop researcher skills, a number of SUPI projects developed resources and mechanisms to support the EPQ.

The EPQ support offered by Lancaster evolved over the lifetime of the project. Initially the project piloted a process of matching individual EPQ students and early career researchers, who would then work closely together over a number of months, with visits to school and university, in addition to personalised online support. Although this resulted in a range of benefits for the school students and researchers involved. it was also resource-intensive and meant a significant commitment of time on both sides. In order to enable additional schools to get involved, and to help make the activity more sustainable, the project moved towards a more general focus on the principles of research and introduced a Moodle to support independent research.

It's good to have the freedom to research something that really interests you-it makes it less hard work!"

EPQ student

Bristol developed an annual EPQ Mentoring Fair, which matched small groups of students to an appropriate researcher. The fair format enabled 32 researchers to mentor 77 students. Researchers offered both subject specialist knowledge and support with the practice of research. Teachers and students both reported the positive impact of the fair on raising aspirations and successful completion of the EPQ.

UEA established an online mentoring scheme, enabling school students to access an authentic research experience that complemented a training course delivered by the university's outreach team, in addition to hosting an EPQ training session for teachers as part of the UEA teacher conference.

Lessons learned about...

Engaging students and teachers

Everyone should have a chance and it is valid to not want to go to university: why should pupils be denied inspiring and interesting experiences?"

Researcher

Realising SUPI Aim Two: Reaching secondary school students from a diversity of backgrounds and abilities and engaging the widest possible range of teachers and schools in ways which have maximum impact on teaching quality and learning.

Key learning points

- Understand who you are engaging with and why. Teachers, students and researchers are all busy people juggling multiple priorities. Taking time to consider why all those involved want or need to engage together is absolutely crucial. If one or more of the parties does not see a need or desire in participating, the activity is likely to fail.
- Remember that both the school and university sectors are in flux, therefore it's important to work out the most important aspects of a working relationship and codify them. This means it is easier to sustain the partnership when things change.
- Make use of internal resources and expertise e.g. Widening Participation teams who may already have relationships with schools you could work with.
- Partnering a key school can provide a focus to work with other schools. Some projects worked through Multi-Academy Trusts or Teaching School Alliances, partnering with one key school which has more resources to then support other local schools in more challenging circumstances.

- Diverse teams are more likely to appeal to diverse audiences. For instance, mentoring PhD students as part of a SUPI team offers a CPD opportunity for the researcher, and the PhD students might be closer in age to the school students, which can help them seem less remote.
- lt is worth making an effort to reach students in areas where there are barriers or a lack of opportunities to get involved. This includes Special Schools. Meet upstream with the Senior Leadership Teams of these schools to assess the specific needs of students and teachers.
- Consider links with specialist organisations working in this space. Check out the NCCPE website to find out more.
- Ensure that Senior Leadership
 Teams in Schools are fully signed
 up to the principle of engaging with
 all students, not just the 'Gifted and
 Talented'. Make sure you discuss this
 right from the start.

Engaging students and teachers

Reaching secondary school students from a diversity of backgrounds and abilities

For Queen's University, Belfast, engaging through Area Learning Communities – regional networks that comprise post-primary schools, special schools and further education colleges – enabled school students from a diverse mix of educational and social backgrounds to work together, adding to the richness of the experience for all involved.

Researchers involved in Exeter's EPEE project came from a variety of backgrounds, nationalities and genders, which helped the students to see a career in the different subject areas as a more attainable goal—whatever their own background.

The OU/DTSA team engaged school and college students working towards a range of qualifications through Media Training workshops. Through this five-day course students, including those with special educational needs, developed a range of practical and professional skills as they worked with researchers and media professionals to produce films about aspects of Open University research.

Sixth form students from different backgrounds and abilities were able to participate in Aberystwyth's SusNet modules, which helped to break down preconceived ideas about university life and study, and so helped students to make informed choices.

SusNet provides an opportunity which is otherwise very difficult for schools in our area to access as distance to other university towns is so far and pupils are quite isolated."

Aberystwyth: Students taking part in a SusNet Geography module.



Engaging the widest possible range of teachers and schools

Bristol found joint INSET days particularly effective, bringing together teachers from a range of schools across a Teaching Alliance or a Multi-Academy Trust. Following consultation with curriculum leaders, an INSET day with the North Somerset Teaching Alliance saw seven academics from different departments delivering workshops with content designed to support the introduction of new topics at either GCSE or A-Level.

Southampton developed online teachers' toolkits to accompany their activities, enabling schools and teachers everywhere to engage in their research, even in cases where a university or school visit is not possible.

For Cardiff, large scale events that involved collaboration across university departments provided an effective mechanism to reach out to a large number of schools and colleges. For example, annual STEM Live events reaularlu involved more than 200 secondary school students taking part in a day of exciting and immersive practical activities in the fields of science, technology, engineering and maths. The Welsh Baccalaureate Teacher Conference brought together teachers from 116 schools for a skills development day, building knowledge and confidence in delivering the Individual Project.

Cardiff: Year 8 students participating in a STEM Live event.



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Creating opportunities that bring together a range of schools

A group of UEA School-University
Partnership schools led a successful
bid to host a radio link with Major
Tim Peake on the International Space
Station. In the build up to the live link,
students participated in a range
of curriculum-linked and enrichment
activities, taking part in workshops
and holding a competition to decide
upon the questions they'd ask
Major Peake.

Students experienced stretch and challenge on Ground Control Day, which is rare for them. They have been enthused and their interest has increased and has had an impact on future ideas for their careers."

Teacher

The OU/DTSA partnership brought together teams of mainly Year 9 students from a number of different schools for a Water Rocket competition, based on the success of the Rough Science Open University/BBC co-production. The idea was to promote creative, hands-on problem solving by designing and building two water rockets, adjusting the variables to work out how best to improve accuracy and distance travelled. The team worked with teachers from a local Special School to adapt the competition rules to allow teams of Year 10 student to participate with some additional support.

OU/DTSA: Students preparing for a launch as part of the Water Rocket Competition.



Cardiff: Year 8 students participating in a STEM Live event.



Understanding who you are engaging with and why

- This is a key engagement principle, and one that makes a real difference. Why would the students or teachers want to engage with you? What are the specific needs, interests, and constraints that they have? Having successfully engaged with a diverse range of young people one SUPI team summarised their learning as follows:
- Allow time for relationship building with teachers and young people, and be open and empathetic to the broad range of experiences, perspectives and backgrounds of all those involved.

- Liaise with the school upstream, throughout, and afterwards to ensure that the project has the best chance of being successful and sustainable.
- Phone, Skype, or meet in person instead of emailing.
- Where it is reasonable, safe, and ethical to do so, let the students take ownership of opportunities to engage, but ensure that they are supported when this required.

Bristol: Sixth form students take on roles in a mock climate change negotiation.



Lessons learned about...

Researcher development

I wish I had a 'me' when I was younger at school, to show me all these good things and give me all these experiences."

Researcher

Realising SUPI Aim Three: Providing researchers (particularly those in the early stages of their career) with opportunities and training to engage with secondary school students and develop their transferable skills as outlined in the Researcher Development Framework.

Key learning points

Researcher training was a key element of every SUPI project.
Developing a reflective culture, where researchers could step back and consider their experiences of engagement and refine their approach was a critical success factor.

- One model does not fit alldevelop a range of approaches, but ensure that they abide by the principles of fairness in access, equity, ethics, and health and safety.
- 2 Involve teachers from the beginning and support their input into training offered.
- Offer drop-in sessions and encourage peer review and support for learning.
- Develop a range of opportunities for researchers to get involved, from light touch, supported activities, to more co-produced models for innovative new activity development.

- Collaborate and build upon existing projects that can demonstrate success.
- Offer competitive grants to develop activities – funding can make a disproportionate amount of difference and raise the quality of the activity.
- Provide networking events that bring researchers and teachers together to explore possibilities for collaboration.
- Develop mechanisms for recognising and rewarding excellence in school-university engagement with research, for teachers, students and researchers.

Researcher development

Creating high-quality training opportunities

Imperial focused on developing researchers' transferable skills, with a bespoke training programme that was developed in-house. Three sessions set the UK school system in context, supported researchers to develop and trial activity ideas, and provided feedback from a panel of teachers, peers and the members of the Outreach team.

Southampton provided researchers with an opportunity to develop their skills, before participating in a Meet the Scientist session with secondary school students. Training covered how to identify key points from their research which would generate discussion amongst teenagers and the ability to communicate a research story effectively to different audiences.

Southampton: Students evaluating the Talk to US! SUPI project.



Communicating research at an age-appropriate level is a skill that requires careful development.

Manchester created a series of video resources, including tips from teachers, to support their face-to-face training course, helping to prepare researchers to bring their work into a school setting. Other SUPI projects incorporated teacher presentations and case studies.

One of my demonstrators said they were much more confident talking about their own research, even in their lab meetings, at conferences, because if they can talk to an 11 year old and explain the real key importance of their research, then really that's the kind of skills that they should be taking to communicate their own research in the wider scientific community."

Providing a variety of opportunities to get involved

Bristol created a range of opportunities for researchers, from the chance to develop new activities from scratch, to participating in established activities with a defined structure and time commitment, such as the EPQ mentoring scheme and teacher Subject Knowledge Enhancement sessions. Researchers were supported through a varied and complementary training programme.

Lancaster introduced a Researcher in Residence programme, enabling researchers to engage with a wide range of school students and enhance the curriculum by sharing their research, explaining their journey into research, and working alongside teachers to support delivery of the lessons.

Cardiff developed an 'Enriching Secondary School Education' seed-corn funding scheme, enabling researchers to work in partnership with school teachers to develop and pilot activities. Several of these projects went on to leverage external funding.

Bristol: Sixth form students receive advice from a researcher about their Extended Project Qualification.



Cardiff: Secondary school student demonstrators at a primary school science fayre.



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Valuing experience

Each Queen's University theme team has a mix of new and experienced researchers, creating opportunities for active learning: the early career researchers could see how those with more experience reacted to unforeseen circumstances and sought to de-mystify jargon and engage the school students.

Making it count

At **Strathclyde**, schools' engagement activity became credit bearing, with researchers able to claim credits towards a PG Cert in Professional Researcher Development.

Queen's University researchers were eligible to apply for the 'Researcher Plus' award, recognising their involvement in activities beyond their normal research.

The Open University revised its promotion procedures to include a Knowledge Exchange Profile from Lecturer to Professor (Grade 3). The new profile allows researchers to demonstrate sustained excellence in working with non-academic beneficiaries, including schools.

Researcher development

Queen's University: Year 9 pupils visit the Centre for Cancer Research & Cell Biology.



Lessons learned about...

Working in partnership

Developing this deep partnership has enabled these amazing interactions to take place which mutually benefit both our students and the University undergraduates, postgraduates and researchers."

Head teacher

Realising SUPI Aim Four: Supporting secondary schools and higher education institutions to work together to create structured, strategic, sustainable and equitable mechanisms for school-university engagement, which increases the breadth and quality of interactions between researchers and students.

Key learning points

The project was predicated on the view that working in partnership really matters if you want to develop sustained, mutually beneficial ways of working. Interestingly, the SUPI projects recognised that not every school wanted a long-term, strategic partnership with the opportunity to co-develop resources. Schools may be under pressure to deliver the core curriculum and in these instances the opportunity to work flexibly with a university while accessing some high-quality resources and activities might be preferable. The trick seemed to be to find a lead school with the appetite and capacity for deeper partnership and then work with them to develop approaches that other schools could buy into without the same level of input.

Develop a shared vision for partnership – and commit to it for an agreed period of time. Revisit the vision on a regular basis and refresh it as required.

Involve Senior Leadership
Teams from schools and
universities at appropriate points
in the planning cycle.

- Introduce key points of contact, with relevant roles and responsibilities, in the university and schools, respectively.
- Create opportunities to network teachers and researchers together, and a mechanism to help people stay in touch.
- Find an opportunity that enables long-term working.
- Recognise and reward involvement in the programme.
- Evaluation is your friend!
 Use it strategically to inform your approach, and to reflect on the project and the partnership.
- Base long-term planning on evidence of success; evaluation should be built into relevant aspects of any partnership.

Mechanisms to support communication and collaboration

Each SUPI project involved keeping significant numbers of university and school staff in the loop. Clear, timely communication was essential and the projects used a number of different channels to promote their work and keep everyone up-to-date.

For Cardiff, regular newsletter updates proved a useful way to stay in touch. However they also created a comprehensive and effective Curriculum Support website. This made it really easy for a teacher to find a relevant opportunity or resource, navigate what Cardiff had on offer, and get involved.

Bristol set up a SUPI Steering Group which brought together senior academics from across each of the University's six faculties, professional services staff, and key teachers from each of the partner schools. This served to raise the profile of the project, improve stakeholder communication and to collectively drive the project forward.

Lancaster established a Teacher University Research Network (TURN) to bring teachers and researchers together to discuss plans for engagement and curriculum support. It also promotes the active involvement of teachers in research.

Manchester's researcher-teacher networking fair created a space for people to network, share ideas, and learn about the SUPI project. This then led to the development and delivery of projects in schools.

An excellent opportunity at the start of the academic year for researchers and teachers to make connections, hear about current projects and discuss possible research collaborations for the coming months."

Teacher

Manchester: Teachers and staff networking around posters at a Celebration Evening.



Working in partnership

Bristol: Year 9 students from Bristol take part in an Experimental Psychology workshop.



Working in partnership

A shared vision for partnership

In planning for partnership, it is essential to consider the needs and priorities of all involved. With the input of the SUPI projects, the NCCPE developed 'Perspectives on Partnership' or 'PoP' as a talking tool to help schools and universities to think together about the sort of partnership they'd like and what this is likely to involve.

If you are beginning to develop a partnership approach, this resource can help you factor in all the different perspectives and to establish expectations. The relationship between the OU and Denbigh Teaching School Alliance was underpinned by a Memorandum of Understanding (MoU), clarifying the nature of the partnership and expectations and obligations on both sides. The MoU refers to two key roles that lead the partnership on an operational basis: 1) a Project Coordinator, based in local schools; 2) an Academic Leadership role for school-university engagement with research, based at the OU.

OU/DTSA: Media training with Year 12 students from Denbigh School.



Building capacity

So often universities work in silos, but creating coherence across a university's approach to working with schools can pay huge dividends.

Establishing a deep partnerships model, Exeter worked with a Multi-Academy Trust, embedding the partnership within the university and Trust schools. Strong and resilient partnerships were underpinned by collaborative planning tools, including sample Memoranda of Understanding, in addition to forging links with Employability, Student Recruitment, and Widening Participation departments.

Developing this deep partnership has enabled these amazing interactions to take place which mutually benefit both our students and the University undergraduates, postgraduates and researchers."

Working strategically with external partners also helped some projects to scale up their provision.

Manchester found that working with The Brilliant Club enabled them to work sustainably with a wider geographic range of schools. The Brilliant Club trains and places PhD researchers in schools, seeking to increase the number of school students from under-represented backgrounds progressing to highly-selective universities.

UEA thought strategically and creatively about working with partner organisations to extend and enrich their provision. For example, through the SAW (Science Art Writing) Trust, which aims to break down barriers between the sciences and the arts, teachers were able to deliver innovative, interdisciplinary projects in schools, suitable for school students of all ages, learning styles and abilities.

Working in partnership

Southampton: Experiment inspired by the online teacher toolkit.



Evaluating to enhance activities

The four year programme provided the SUPI projects with an opportunity to test and refine their activities over a number of cycles. Embedding evaluation throughout was key to improving performance and developing an evidence base.

Bristol worked with an internal and an external evaluator to develop each of the activities into successful models of engagement, whilst exploring the strengths and weaknesses of each approach. This was done in conjunction with the overall evaluation of the project.

Southampton's 'Murder in the Medical School' activity evolved significantly over the course of the SUPI project, responding to feedback and input from teachers, school students and researchers. A day of hands-on activities at the university's Biomedical Imaging Unit is now followed by a Case Conference at the school, giving students an opportunity to present their findings.

To support their activities, Exeter developed a range of evaluation tools to support reflective school-university partnership work and capture the voices of those involved.

Sustaining excellence

Evaluation can help to sustain excellence. If there's an evidence base of success, universities and schools are more likely to commit funds.

The OU/DTSA SUPI used action research to develop their evidence-base, embedding evaluation throughout their work through iterative cycles of planning, action, analysis and reflection.

Cardiff focused on developing the infrastructure and support to take all school engagement from chaos, to organised chaos, to strategic partnerships. This involved a range of activities, including audits, teacher advisory panels, seed funding, internal and external profile raising, and linking with key 'doers' to achieve positive outcomes and enthuse others. This resulted in sustainable growth and expansion.

It can be tempting to view success in terms of the numbers of students involved, rather than the depth of engagement that those students have had. Working with the SUPI teams, the OU/DTSA introduced the idea of a SUPI metric—which is a planning tool that illustrates the value of in-depth work with smaller numbers of students.

The Learning Project

Alongside the SUPI programme, in 2014 RCUK commissioned a learning project to find out more about the benefits of partnership between universities and schools—and some of the common barriers. At the end of the programme, we invited the SUPI teams to revisit the key learning points from this research, and share their top tips.

Communicate well

- The principle of frequent and meaningful communication with the 'right' people is essential – consider a regular newsletter to keep everyone in the loop
- Listen as much as you talk
- Ensure that all voices in a partnership can be heard – mechanisms such as teacher advisory panels can help to support this

Bridge gaps

- Attend to the difference in terminologies and beware jargon
- When planning be aware of different pressure points in school and university calendars
- Identify and value the people that naturally bridge the gap between school and university cultures, such as university staff who have been teachers and teachers with a research background

Develop leaders

- To develop effective support for school-university partnerships, it is critical to involve leaders, at every level of the organisation, who understand the value of this approach. Those who have experience of participating in the programme, can become key advocates
- Reward all those involved in an open, transparent way
- Empower people within the partnership

Share purpose

- Research previous school-university partnerships to see what worked and what didn't; apply the findings to your context.
- Start with the 'do-ers' don't focus on the 'do-nots'!
- Think carefully about how your partnership work can be aligned with both organisation's strategic priorities
- Keep checking in with partners' priorities over the course of a long-term project, to ensure that it is still meeting their aims

Resources

- Try to avoid 'reinventing the wheel' explore the wealth of learning already available
- Not all activity needs to be newconsider how you can support, build upon, or join-up existing programmes of activity
- From the start, think about how your activities could build towards sustainability and the messages that will encourage senior leaders to get on board
- Resources can be found via the NCCPE website: www.publicengagement.ac.uk/ SUPI-lessons

Find out more



You can access a wide range of SUPI resources via the NCCPE website: www.publicengagement.ac.uk/SUPI-lessons

There you'll find some of the inspiring case studies and rich resources created by SUPI projects, over the course of the four year RCUK programme. This includes online guides and tools such as:

- Exeter's Empowering Partnerships: Enabling Engagement SUPI resource suite
- OU/DTSA SUPI school-university resources
- Southampton's Talk to US!
 SUPI 'Building School-University
 Partnerships' Guidebook

Perspectives on Partnership tool

With the input of the SUPI projects, the NCCPE developed 'Perspectives on Partnership' (PoP) as a talking tool to help schools and universities to think together about the sort of partnership they'd like and what this is likely to involve.

If you are beginning to develop a partnership approach, this resource can help you factor in all the different perspectives and to establish expectations.

SUPI Learning Project

The SUPI Learning project (2014) reviewed the evidence base about school-university partnership working. A literature review, workshops and in depth interviews helped us identify learning from previous initiatives and critical challenges in the area. The work informed the development of the SUPI project.

You can find more information about the PoP tool and Learning Project via the NCCPE website, and download the tool and reports.



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