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RCUK PUBLIC ENGAGEMENT WITH RESEARCH:
SCHOOL-UNIVERSITY PARTNERSHIPS INITIATIVE (SUPI)

FINAL REPORT – UNIVERSITY OF EXETER

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SUPI PROJECT NAME: EMPOWERING PARTNERSHIPS: ENABLING ENGAGEMENT, UNIVERSITY OF EXETER

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1: THE 'STORY' OF YOUR SUPI PROJECT

a) Please provide a narrative summary that describes the journey your SUPI project has taken from beginning to end and covering all the key developments in between.

The project initiated when the Principal Investigator (PI), from the Graduate School of Education, but also Associate Dean for Social Sciences, realised the opportunity that the SUPI call offered, particularly in bringing together expertise from across the university, and across all three campuses, thus being an inclusive project with the potential on have impact on a systemic level. The project design was founded upon the principles of reciprocality and mutual respect, so that schools and universities worked together to co-create shared benefit, rather than the more traditional model of universities parachuting into schools to help them. From the outset, at the application phase, the project had the full support of senior staff in the university and this has been significant in establishing a clear legacy. The Project Manager was a former Science teacher, and a post-doctoral researcher in the Graduate School of Education: she was appointed to her first lectureship during the SUPI project, and became Co-Investigator (Co-I) for the final phase of the project.

A distributed leadership model was adopted, that of groups of triads: education expert; subject expert; teacher expert. Lead Education academics have been teachers and are teacher trainers, working closely with schools through research partnerships and through Initial Teacher Education. They visit schools on a regular basis as part of visiting PGCE trainees. While these lead education academics were subject specialists to some degree (having completed an undergraduate degree in the subject they taught), the leadership model also involved lead subject academics, at the forefront of their research field. The final part of the leadership model was lead teachers from lead schools, to be involved in the planning and decision making. This structure was the basis of very focused 'theme teams' which generated a way of working which built mutuality from the outset. Four theme teams were created – Science and Maths, Economic Understanding, Technology and Engineering and Philosophy of Contemporary Dilemmas. (See Figure 1 in section 9). The choice of these teams was deliberate: two focused on the STEM emphasis in the call, but two were from Social Sciences in order to highlight the value of schools' partnerships across the full spectrum of subjects.

The Science and Maths of a Living Planet theme, worked on creating bespoke Science and Maths activities, and including the use of university equipment and facilities. Technology and Engineering focused on the cutting edge manufacturing process of Additive Layer Manufacturing (ALM). Students were given the opportunity to use industry-leading facilities in the university and this learning was replicated in the school environment with the provision of (and training in) entry level ALM machines. The Philosophy of Contemporary Dilemmas theme engaged students in exploring ethical dilemmas involved in genomics, technological advancement and society. Strategies of argumentation, logical conceptual analysis and debate were taught, focused on these topical issues. The Economic Understanding theme introduced young people to contemporary economic concepts, using problem-based learning and business simulations. A range of activities were run through the "Think like an economist" concept.

Each theme team worked independently with their own set of schools and ECRs. They were the drivers of the project, and responsible for recruiting ECRs, managing their delegated budget and planning and designing the partnership work. There was oversight by the project management team, and regular meetings as a core team

(representatives from the theme teams, the project management team and ECRs). There was also a project steering group including key university staff not directly involved with the project: the Researcher Development Programme lead; the Widening Participation Officer; the Public Engagement Manager; the Graduate School of Education Partnerships Office. This involvement was important in supporting the embedding of learning within the university. The PI, Project Manager and Project Administrator were based in the Graduate School of Education, and members of this community of expertise. They met on a regular basis to discuss macro-level project goals and organisation.

In Year 1 the focus was on establishing working relationships within and beyond the theme teams, and planning and enacting engagements. At this point in the project, we had considerable success in facilitating engagement between secondary school students and researchers. Most of this engagement was on school sites but several events brought students to university campuses including high specification environments (such as instructional tour of facilities in the Centre for Additive Layer Manufacturing). Students were given the opportunity to use cutting edge resources (working in laboratory settings). There was also the establishment of regular engagements – an EcoSoc lunchtime club, and Teacher Masterclasses. At this point the activity was more directly targeted at curriculum enhancement, though of course, the engagement between researchers and schools itself often raises ambition.

Reporting on these engagements led to the recognition of a need to explore evaluation tools more aligned with strategies used by schools and provide more useful data. Training was given in one of the core team meetings by the head of public engagement and the project manager (an ex-teacher). It was recognised this was a key area for development, and so it was agreed a practical written resource showcasing evaluation strategies would be created. Lead education experts from GSE created and led a training session for the ECRs involved in the project, repeated later in the year for newly-recruited ECRS, introducing them to key issues about school and the curriculum, learning, and effective interaction.

In year 2, researchers continued to visit schools (by bike in one case - the "Tour de Math"), and school students and teachers visited university facilities. Targeted student groups included Year 12/13 Design Technology A-level students, Year 9 students who had recently opted to study GCSE Business Studies, and year 8/9 science students who had some form of special educational need. Contemporary topics such as sustainable transport, supply chain modelling and technology extending the human brain were explored and showcased. Curriculum links were made to product design, and evolution, as well as cross-curricular links such as Religious Education topics that cross over into philosophy, sociology and anthropology.

The use of four discrete theme teams to drive the project at a subject level continued to work well. The involvement of the 3 leads and ECRs, at its best, led to creative engagement with schools and students. It also meant that in some cases where due to workload, one of the team members has to take a back seat, engagement still occurred.

In year 2, we also held the second of our annual Coaching and Mentoring days for ECRs, facilitated by members of staff from the GSE. Content was planned based on needs identified by the ECRs in their reflective logs, with specific focus on our impact goals and drawing on the results of the Year 1 evaluation report. This included how to foster 'behaviour for learning' and an introduction to lesson planning. The training was extended to ECRs across the university who were interested in presenting their research to schools. We also provided more input here on the need to involve teachers more in planning school visits, giving stronger recognition to teachers' professional expertise. These training sessions were earmarked as suitable to be developed as online presentations in the longer-term.

During this second year, the SUPI project had a strong focus on the Widening Participation (WP) agenda. The university strategy on WP was discussed in a number of core team meetings (which all staff involved in the project are invited to attend), with associated discussion around the school level policy concepts of Unseen Children, Narrowing the Gap and coastal/rural underachievement. These are terms schools are more familiar with, rather than the HE led WP agenda, but the similarities between the policies were highlighted and discussed. This was repeated in the ECR training, with the addition of ways in which ECRs could work with teachers on the WP agenda when engaging with school students.

Two principal evaluation strategies were used, firstly continuing to require themes to plan specific evaluations into their events (after training and written guidance in the form of a handbook); and using a named person to deliver, analyse and write up the evaluations. Both approaches have been useful, but having a facilitator whose job it is to evaluate proved to be the most effective way of collating useful data, whilst freeing ECRs to focus on delivery.

In year 3 we continued working in partnership drawing on ECRs research interests, expertise and experience. Topics were chosen for their contemporary relevance (eg. ethics and cognitive science; pay-gaps) as well as links to the curriculum. Students continued to experience what a university is: through extended personal contact with university researchers; getting acquainted with university-style teaching; visiting campuses; seeing/using cutting edge facilities/technologies. Teachers themselves were introduced to cutting edge research and equipment, as well as emerging theoretical concepts, and shown how these can be discussed in a classroom context. Two of the partnership school teachers have joined a College Widening Participation Steering Group at the university. Researchers have worked through the science curriculum with science teachers to identify areas where they can deliver workshops/activities to enhance the students' learning and support the teachers' ability to bring current research into the classroom. Long term relationships have been built and enhanced by SUPI, many of which will continue after the project end, giving longer term sustainability.

The SUPI work acted as a springboard for other work, including a Royal Society School Partnership Grant by a University Academic and a School Science teacher. This led to students presenting a poster at a science teachers' conference (ASE, January 2016), and a publication in a practitioner journal. Additionally, we have linked up an ECR who developed her project through SUPI to someone who developed a successful REF 2014 Impact case study, so they can develop one for REF 2020.

As part of our legacy planning, a joint workshop between the SUPI project and the Catalyst project teams at Exeter was held to share learning and plan for the future. One of the actions of this was the establishment of a working group to embed the learning further in the university.

In year 4, whilst the activity of the theme teams continued where appropriate, the emphasis of the project shifted. Our over-arching plan for the extension year was to secure the legacy of the previous three years creating a sustainable future for the school-university partnerships. This 'deep partnerships' model of relationship-building with schools helps show how we can address widening participation, bringing researchers into schools, and bringing students to the university. The PI and Co-I worked closely with a local Multi-Academy Trust University Liaison Lead to develop and pilot a variety of partnership planning tools. Through regular meetings with the Student Recruitment and Widening Participation Office; Curriculum and Work-related Learning Office; and Public Engagement department as well as with a named contact within the Ted Wragg Multi-Academy Trust we have developed and piloted a number of mechanisms and processes which facilitate sustainable partnerships, and which are not reliant on individuals but on clearly defined roles. (See Figure 2 in section 9 below).

Additionally, during this year the SUPI engagement with schools continued to extend beyond the original subject themes to new areas across the university, successfully extending the reach of the project into different departments. We moved away from the theme focus to enabling and facilitating a host of researchers and university departments in their engagement with school students. This included new involvement from representatives of the College of Humanities in a number of projects while still maintaining the established partnership between Biosciences and Mullion School. Training was held for teachers in how to deliver a specific Sex and Relationships education methodology and how to integrate it into teaching (particularly apt given recent government policy move to embed SRE more in the curriculum).

We held our plenary conference *"Celebrating the past, visioning the future"* which had the aim of set up links with researchers and schools, exploring the kind of activities researchers can offer interested schools. Invitations were extended to all Partnership schools (those the GSE work with for teacher training), and all university research staff. We also worked with the College of Humanities WP officer to hold a set of WP facilitators' Training sessions.

A key project legacy has been the creation of a website (hosted by the University of Exeter) which hosts a wealth of resources and offers ongoing support and guidance to teachers and researchers about effective school-university partnerships. This is now live and can be found at
http://socialsciences.exeter.ac.uk/education/research/projects/epee/

It includes resources we have created over the project, material for teachers to use with students, training materials for researchers, project planning materials. We have created 16 videos of varying length which help exemplify the benefits of these partnerships, and act as teacher and ECR resources. It also directs teachers towards the wealth of opportunities the University of Exeter offers regarding getting researchers into schools, signposting teachers and schools to these opportunities.

2: KEY FINDINGS, LEARNING POINTS AND ENGAGEMENT ACTIVITIES

- Please list the key findings from your SUPI project

  ☐ The value of establishing deep partnership models eg with a local Multi-academy Trust, and embedding the partnership within the university and the schools involved in the trust. The importance of building stable and resilient relationships between schools and university departments as a foundation for partnership work. While universities provide a wealth of resources and talent which can help enrich schools' curricular or extra-curricular activity they are complex institutions. The same can be said of schools given the policy agenda of creating more multi academy trusts. By working towards a deep partnership model we have created and tested a 'map' to navigate the partnership landscape (see our website http://socialsciences.exeter.ac.uk/education/research/projects/epee/ and Figure 2 in section 9)

  ☐ The importance of working with and signposting to the various university departments that facilitate school and university engagement.

  ☐ The critical need for university and school engagement at a systemic level ie. the establishment of a central contact point, and centralised training material available to researchers and schools.

  ☐ Clarify expectations from the start and to keep things manageable (through memorandum of understanding etc).

  ☐ Development, and subsequent adaptation, of proformas/templates to ensure that all involved remain focused on the project goals.

  ☐ The importance of ownership by and good communication/flexibility from all partners, within a distributed leadership model.

  ☐ Evaluation as a cornerstone (beyond number-crunching) – perhaps even having a named person responsible for evaluation. This includes fore-fronting your goals as project drivers (and to evidence them through evaluations).

  ☐ The value to researchers of having to communicate complex ideas with students, but the need for training to equip them to do this.

  ☐ The benefits to students of engagement with cutting edge ideas as curriculum enrichment, but also to raise aspirations.

  ☐ The benefits of sustained engagement eg Ecosoc, Mentoring schemes as well as of shorter term targeted engagements, such as workshops open to a range of local schools.

  ☐ Create opportunities for interaction and networking between possible new partners (putting teachers and researchers in the same room) as we did in our plenary conference.

  ☐ The importance of using existing systems to advertise opportunities – such as newsletters that go out to schools from universities, school subject journals and networks, internal e-bulletins etc.

  ☐ Involvement in partnership work can be used to support applications for progression. For example, the University of Exeter's professional development programme recognises partnership work as a progression criteria – "Make a significant contribution to outreach activities at a level consistent with the College's Business Plan targets", and schools may use involvement in partnership work to justify Teaching and Learning responsibility payments.

- Please list the most important learning points from your SUPI project

  ☐ The need for researchers to understand the school context, and schools to understand the university context.

  ☐ The need for the relationships to be reciprocal, with mutual benefits. For all involved to have a commitment to building reciprocal relationships.

  ☐ It should be acknowledged that the benefits will vary from situation to situation: each institution, department, researcher, teacher, subject and school student will have varying (sometimes competing)

priorities. Additionally, the benefits may be in competition (for example giving time for researchers to present their research in a crowded curriculum environment).

☐ Realise and harness the importance of student-voice - create explicit opportunities for eliciting and responding to students' perspectives on their experiences, interests and needs.

☐ The need to build deep partnerships which are not person dependent but establish a sustainable relationship at institution level, with responsibility at a role level. Having a point of contact, a coordinator role in university and schools may enhance the effectiveness of SUPI work, and give it formality within the institution.

☐ The need to be aware of and responsive to government and institutional policy change which may create opportunity for new partnerships, or the refocusing of existing ones. (eg. Sex and Relationship Education, Pupil Premium etc)

☐ Having a shared vision/focus and the determination to achieve what is best for the students.

☐ Have flexibility of expectations – not every school/university interaction will look the same.

☐ Consider engaging experts in web-design and production of video resources to ensure high-quality professional outputs (both our videographer and our web-designer helped us capture our successes and learning, as well as produce artefacts of use to schools and researchers).

Many of the challenges to effective partnerships are due to resourcing – on a staffing, time and at a fiscal level, as well as in terms of good will.

☐ Staff turnover: both in schools and at the university: there is inevitable turnover in staff involved, which can disrupt or delay planned activity. At University, this can be a grant success which causes a re-prioritisation of workload. Important that in creating strong teams, partnerships do not create teams which are over-dependent on key people.

☐ '*Finding time to dedicate to the project is difficult in the very pressurised environment we all work in*' – true at both a school and university level. Time pressure may be mediated by embedding aspects of partnership work into existing work/foci, such as Widening Participation, Pupil Premium.

☐ The need to give project partners the space and time to work together on developing tools, projects and what effectiveness/success will look like, rather than expecting high quality engagements with no planning.

☐ Think about transport costs – for university staff to travel to schools; and for the hire of vehicles to get students to campus.

☐ It can sometimes be difficult for teachers to get permission (due to local authority trip planning systems/risk assessment) to take students off site, so flexibility is needed.

- **Please list all engagement activities that were developed and run during your SUPI project**

We have interpreted this as engagement activities between schools and the university and have thus left out examples of researcher training (Coaching and Mentoring days) and capacity building (within the university, school teachers supporting researchers). We have not reported on the activities related to recruitment of new ECRs and new schools which occurred throughout the project in all theme teams.

In the table below we have listed the events according to theme team year by year as well as the project-wide engagements. (As Year 4 interactions where not necessarily theme team based we have listed them separately.) While these lists name the activity, they do not reflect the planning and evaluation that goes on prior to and following the events. Each event had a minimum of one planning meeting with all relevant stakeholders, and much communication about design and practicalities. It does not include planned engagements with schools and researchers which did not come to fruition (due to a range of circumstances, such as OfSTED inspections, staff illness etc).

	Year 1	Year 2	Year 3
Economic Understanding	*Planning and designing the activities that ran throughout the project*	Business Study taster days in school. Behavioural Economics workshop in school. Year 9 University Business School visit/tour, Business simulation	Transitions to University workshop series (first two in university as part of ESRC festival of Social Science 2015, following ones in schools). Year 9 University Business school visit, Business simulation/ competition
	Business Studies mentoring of school students by university students; Student Shadowing Days' (following on from student mentoring of 6th form students); Economic Understanding Teacher Masterclasses; Yr 12 Economics and Business Conference (sessions presented by leading research academics).		
Philosophy of Contemporary Understanding	Series of A level Science (Psychology) lessons How do scientists think?' (on key themes in philosophy of science) and 'Are you a cyborg?' (on philosophy of mind and the use of tools in thinking) in school by ECR.	Lunchtime lecture "What is science?" to 6th form students (70 students). Philosophy/Religious Education day at partner school: lunchtime lecture "What's special about being human?" (open to all school staff and students, 50+); sessions on ethics to Religious Education classes (one yr 9, one yr10) workshop with A-Level RE students.); "Are you a cyborg?" workshop event at the University of Exeter, organised as part of the ESRC Festival of Social Science 2014. Students from 3 schools attended. ECR support in school's A-level revision conference	Links made both to the Religious Education curriculum and to A-Level psychology syllabus. worked together to provide stimulating activities for students
Science and Maths	Maths workshops in school; University visit - science lectures, tour of science department, work in laboratory.	"Tour de Math" - university team cycled across nine towns over 3 days, visited 14 schools, delivered workshops.	Development/running of new microscope workshop for AS Level Biologists in school. Talks by researchers on own genetics research to A2 biologists, in school. Summer activity day (school students visit uni) Royal Society Partnership Grant. School students present a poster at a science teachers' conference (ASE, January 2016)
	EcoSoc: regular lunchtime Ecology club; evolution workshops (each student in the school has attended this workshop at least once over the lifetime of the project).		
Technology and Engineering	Team of ECRs visit school to deliver Yr 12 workshop using school's design equipment. Yr 12 students visits to the Centre for Additive Layer Manufacturing, including tour and use of university 3D industrial engineering design software (Solidworks)	ECR visits to school to deliver Year 12/13 workshop using schools design equipment. Yr 12/13 School visits to the CALM, including tour and use of university design equipment (Solidworks)	Development of Technology and Engineering podcast/video (Familiarising school students with ECR's 'journey' to becoming a researcher in Additive Manufacturing, and the nature of her current life as a researcher.

Year 4: As reported above, the main focus this year was establishing deep partnership model with a local Multi-academy Trust, and embedding the partnership within the university and the schools involved in the trust. Through linking with the Student Recruitment and Widening Participation Office; Curriculum and Work-related Learning Office; and Public Engagement department as well as with a named contact within the Ted Wragg multi-academy trust we have developed a piloted a number of mechanisms and processes which facilitate sustainable partnerships. As part of this, a year 7 questionnaire on aspirations was piloted which can be used to trace changing aspirations as they progress though school. Additionally, a Families' University Day was piloted. This gave opportunities for Year 7 and 8 students from a newly established school, their parents and siblings to come on to campus and hear first-hand from undergraduates what university is like. (Saturday a.m. event)

Key strategic engagements this year included:
- ☐ monthly meetings with school representative, SUPI project management team, Student Recruitment and Widening Participation Officer; and Curriculum and Work-related Learning Officer;

- ☐ the establishment and development of an "Engaging with Schools" working group (which meets quarterly) in the University of Exeter, headed by the "Engaged Research Manager" and aligned with the newly formed department of Innovation, Impact and Business;
- ☐ the plenary conference *"Celebrating the past, visioning the future"* which had 48 attendees and included 15 teachers from 13 schools and 27 researchers.

School level engagement also occurred throughout the year, both in established partnerships (The Science and Maths, and Economic Understanding theme teams) and with new partnership work being established (Sex and History Project; Argue to Think Project).

- ☐ Science and Maths: development and running of A-level mammal dissection practical in school; continued EcoSoc engagements.
- ☐ Economic Understanding: Economic Understanding Teacher Masterclasses; Yr 12 Economics and Business Conference, Student mentoring.
- ☐ Argue to Think project: – 3 bespoke partnership projects run with 3 different schools, based on difficulties A-level students (and teachers) face in History. Involved planning and developing interventions with teachers, and a series of workshops with A-Level History students.
- ☐ Sex & History project: – Training sessions were held in order to disseminate the Sex and History resource to teachers from secondary schools in Devon, and to get teacher feedback on the practical application of the resource. Researchers have continued to engage in modelling/supporting delivery in schools

3: THE IMPACT AND INFLUENCE OF YOUR SUPI PROJECT

a) Please summarise the impact(s) of your SUPI project across its lifetime

Our project aimed to impact 3 groups of people – school students, Early Career Researchers, and school teachers. It is hard to state exact participant numbers from each of these groups, much less record what proportion of these were "impacted", due to the complexity of the EPEE project and the model of distributed leadership. For example, the Technology and Engineering team involved 1 ECR, and worked with 2 schools over the life time of the project. The Science and Maths theme team on the other hand had sustained regular engagement with several teachers in 1 school but involved a host of ECRs on a range of levels (some undertaking regular attendance at school clubs/university visits; while others only attending to present their research as a one off). Even these statements give an incomplete picture for example, the Tour de Math involved university researchers visiting classes in 14 schools, and may have engaged with one class of 14 students in one school, followed by 2 classes of 30 students in the next. Many of the regular engagements were voluntary, while average attendance at EcoSoc is 20 students these may not be the same 20 students at every session.

As we designed and developed the evaluation tools that helped illustrate the impact of our project as described below we have become aware of the need to develop stronger systems for evaluating the impact of schools-university partnerships, whilst also recognising that not all activities are amenable to robust quantitative data. Our leading of the OFFA grant, *Understanding effective evaluation of the impact of outreach interventions on access to higher education: phase two* will build our own expertise in this area, and the use of Theory of Change models on the HEFCE *Transforming Transitions* project is a further enhancement (see section 6). This means that the university will be better placed to have appropriate evaluation frameworks in place from the outset.

1. **Impact on students' attitudes towards Science, Maths, Engineering, Economics and Philosophy.**
   This impact goal relates to our aim of *using contemporary research to enhance the curriculum* in these subject areas. The opportunity to meet and work with university researchers has a real and visible impact on those students' interest in the subject represented. Hearing from voices other than their usual teachers, particularly from adults actively involved in generating new knowledge benefits from the advantages of the difference and novelty. In fact, student responses were less likely to mention changed attitudes to the over-arching subject, and much more likely to mention a change in how they think about the specific topic being

addressed. A number of students, when asked to evaluate the events they had attended commented that they had changed their minds about long held beliefs as a result of the engagements – "one Year 11 girl said that the lunchtime lecture had changed her mind about how she sees the relationship between humans and animals" (Philosophy of Contemporary Dilemmas lead teacher). Additionally, it was recognised through the Philosophy, and Science and Maths theme teams that students have been introduced to topics they might not have thought about studying before.

One clear impact on students' attitudes was evident in the excitement students showed about learning. This was particularly strong where the engagements involved hands-on activity, especially where it involved those who are difficult to engage. The Lead teacher for the Technology and Engineering theme reported that "students were enthused and motivated by their contacts with the ECRs, which had already influenced some of their D&T work". Evidence of learning was also captured in the student evaluation of the events led by the Technology and Engineering ECR. Students stated that learning did take place, that their knowledge and understanding of product design and manufacturing processes grew, in particular their knowledge of Additive Layer Manufacturing and its uses. The EcoSoc activity enabled the lead teacher to bring a wide variety of research scientists into the school and provided the opportunity to introduce students to topics that are not included in the science national curriculum. As a direct consequence, students are now contributing ideas for future sessions and having a say in what they learn.

By including contemporary research in our engagement activities, we are able to show students that what they are learning in school relates to the work that researchers are doing at the University. We are also able to show students that researchers and scientists are not all old men in lab coats, and it has helped them to see studying the various SUPI subjects as a more attainable ambition. In EcoSoc students have told their teacher "I'm interested in this career" and she has asked the university subject lead "do you have anyone whose working in this field?", the subject lead finds someone to present. "That person will come and talk about that area, which for the kids is remarkable." (Science and Maths school lead).

2. **Impact on students' personal aspirations towards university education.**
   Through *Engaging students from a diversity of backgrounds and abilities to raise ambition, w*e set out to inspire young people in terms of developing their knowledge and understanding of contemporary issues and debates, but also what it means to go to university and what it means to be a researcher.

   In many of our evaluations there have been qualitative and quantitative evidence of impact in this area. For example, the end of year EcoSoc evaluations (Summer 2015) students listed a range of things they liked about EcoSoc, from the very hands on experiences, to finding out about university research. Also, one of the questions asked "How much would you say that hearing talks from scientists at Ecosoc has made you feel confident that you can progress to university?": just over half answered "a lot", and a further quarter answered "a little". The end of day evaluations of the Transitions to University workshop, which used modelling clay monsters as a way to explore fears regarding university, also showed that the students' mindsets had changed: a total of 17 students declared they felt there were "less scary university monsters" in the exit poll, the remaining 6 said there was no change to their university monsters. For those A-Level Technology students considering a design or engineering degree, the lead teacher reported that the contact had strengthened their interest in these disciplines.

   It is recognised that coming onto campus is great for inspiring students to go to university to study especially when using cutting edge university facilities. The impact of a visit to a physical university site is considerable. The Lead Science Teacher on the project, from Mullion School, considers that going into a university building is important for kids who've not considered it and noted that before the visit "some students don't even know the university exists". The University Family Day involved students presenting an Interactive session on "What university is like" – dispelling some myths along the way. Key topics such as financing your time at university, the requirements for entry into university and what lectures are like were discussed. There was also time for questions throughout. The visit concluded with a tour of the campus, looking at the library and ICT facilities, the sports centre, the Students' Guild and some lecture theatres/seminar rooms. Students were asked "what are you thinking about the possibility of going to university" at the end of the event. Two thirds said they would consider going: this is significant since the students were from low participation neighbourhoods with parents who themselves did not attend university.

The researchers that are involved in the SUPI project come from a variety of backgrounds, nationalities and genders and have acted as role models which represent the diversity of people who can enjoy university careers. This has helped the students to see a career in the different subject areas as a more attainable goal whatever their own background. The lead teacher in the Science and Maths theme recognises that "the fact that the sessions have been run by young recent graduates, many of whom are female has been mentioned by students as 'showing them that they could do that'". She reports that as a school "we are getting more students asking about doing work experience at Tremough now, with an eye to trying to become research scientists."

Additionally, through the Argue to Think Project, a number of workshops for A-Level students were developed to help students understand the links between written and spoken argument and apply this to writing. In helping the students to improve their written argument the project gives the students the means by which they can achieve decent grades at A level which then gives them the opportunity not only to aspire to go to university but to actually make the dream a reality. The soft skills that are taught through the verbal argumentation, which is an important element of the Argue to Think approach, helps students of any age communicate their ideas and needs more effectively. This element of the research is not just about aspiration and ambition but about necessary life skills.

It is difficult to ascertain the longer-term impact of engagements, particularly whether it results in students choosing to go to university when they would not have otherwise done so, or if students choose to pursue our SUPI subjects when they would not have done so. Additionally, we have been cautious of attributing changes in attitudes to the fairly brief engagements we have with students. However, we have developed a tool which in the long term may help us establish if university engagement has had an impact on students' aspirations – an "Aspirations questionnaire". This may be particularly useful as the school we are co-developing our sustainable partnership with has opened within the last 2 years and we have been able to get the year 7's to fill in the questionnaire. While it does need further refinement the school has agreed to do the questionnaire with these students every year. The results from this, along with tracking which students take part in which engagements may help us begin to see which engagements may have greatest impact.

3. **Impact on teachers' capacity to bring contemporary research into the classroom.**
   We had originally viewed this as equipping the teachers with knowledge and skills to enhance the curriculum with knowledge they have gained from researchers. While this is part of the picture, another aspect has emerged – that of signposting teachers to opportunities offered by the university to get researchers into the classroom. 8 out of 10 teachers who responded to the plenary conference evaluation recorded that they had swapped their details with a potential link as part of the event. (14 of the 19 researchers also said they had swapped details with a link). Teacher learning is based on mutual understanding and respect as illustrated by an ECR "we have a good relationship with teachers, who we learn from as they learn from us". We have worked with teachers to develop their confidence in areas they find difficult to teach (evolution, writing an argument, emerging economic understanding, cutting edge industrial processes).

   The Business School annual Teacher Masterclasses, informed by current research, have deepened teachers' knowledge base, equipping them to teach particular topics in the Business Studies GCSE and A-level courses, as well as Economics GCSE/A-levels with greater confidence. The Design and Technology university-school involvement has demonstrated that one element of bringing contemporary research into the classroom operates at the very practical level of equipment and resources. Typically, Design & Technology in school accesses a manufacturing process when it has been maturing in industry for 30 years. However, in this project, the Technology and Engineering theme team have helped to make 3D printing technology accessible to teachers and students at a much earlier stage in its industrial exploitation.

   At the same time, the SUPI project has modelled collaborative ways of working which not only bring contemporary research into the classroom on a one-off basis but which more fruitfully develop teachers' capacity to use it subsequently. For example, one of our ECRs worked with teachers co-creating material. The teacher and researcher worked together to find a working solution that made it easier for teachers to help students. The researcher delivered the session twice and each time was observed by one of the

teachers involved in the research. These teachers then went on to deliver the 'model' session to the rest of the History candidates using the materials and ideas generated by the researcher. Another example of equipping teachers in this way is the Sex and History project. This applies research and methodologies developed in History and Archaeology, together with research and methods developed in Sexual Health studies, to settings where Sex & Relationships Education takes place. The researchers held training sessions for teachers on how to deliver the methodology and how to integrate it into teaching. This work continues post-SUPI, and is particularly pertinent given the announcement by the Education Secretary, Justine Greening, (1 March 2017) to put 'Relationships and Sex Education' on a statutory footing.

4. **Impact on ECR's skills in communicating research to young people.**

This relates to our aim of *developing and providing mechanisms and resources for effective coaching of researchers in engaging and interacting with young people, and for constructive critical feedback in the school context*. The SUPI project has had significant impact in this area. At the beginning of the project, our evaluation of engagement of ECRS with schools highlighted that there was a tendency for ECRs to think like a University lecturer and to believe that strong knowledge of the topic, presented didactically, would be sufficient to engage young learners. In other words, there was an unspoken assumption that communicating research was monologic, and that standard university communication practices could be replicated in schools. Through drawing on the professional and research experience of the Educational researchers on the team, we developed specific training both to challenge this assumption and to support the development of more appropriate communication strategies. By engaging with the SUPI training we created, and by gaining experience in school this attitude changed. For example one researcher observed that involvement in the project had helped with effective communication: "as well as being lots of fun it helped me develop techniques of communicating concepts to young people, and engaging children in science" (Science and Maths ECR). The training also supported ECRs in becoming more autonomous and self-critical in reflecting on their school engagement, as this comment reveals:

> "After the first class, I felt that I had perhaps tried to cover too much material, and that as a result there had not been enough time for students to ask questions, or discuss the issues raised. I suppose that this can be an easy trap to fall into when you're used to delivering lectures. For the next class, I reduced the amount of material I attempted to cover quite significantly, focused on more familiar examples, and broke the material into smaller chunks, with discussion periods between each section, and this seemed to work much better" (Economic Understanding ECR).

ECR reflective evaluations throughout the project indicate that they learnt a considerable amount about working with schools, particularly about: the range of ability present in secondary students; the importance of sustaining motivation and engagement; how to make the transition from lecturing to more discursive and interactive engagements with students; and effective ways to organise groups and activities.

This was also a situation where the mutuality of the project was evidenced – the teachers were supported and encouraged to give feedback on the communication skills of the researchers, which gave both practical guidance and positive reinforcement of their achievements:

> "Alex [ECR] was at ease in the classroom and his past experience was evident. He gave accomplished performances all day in different formats. He was always open to questions and responsive to challenges or queries." (Lead teacher Philosophy theme team).

> "Thank you so much for coming on Friday. As far as I was concerned it was a fantastic success. You must have been exhausted by the end of the day. You fitted in really well with the classroom routine and led things in lots of different formats. You speak with great clarity and precision. The turnout for the lecture was great and I have already had one student say you changed her view on the issue" (teacher, Philosophy theme team).

School teachers also used their experience to advise and support the ECRs developing particular skills – a number of ECRs designed and trialled new educational games and resources. "Feedback from the teacher afterwards on how to better design games for teaching early teens was invaluable and is something I can definitely build on in success and confidence" (Science and Maths ECR). Thus activities have allowed our

ECRs to develop and trial new sessions and learning activities, which they will hopefully be able to take further to more schools locally and beyond. It has happened on a larger scale too – the "Sex and History" Project we ran in year 4 invited teachers to a training workshop in order to gather feedback on the methodology and resources the research team had developed (http://blogs.exeter.ac.uk/sexandhistory/).

Targeted meeting of this goal was through the annual Coaching and mentoring training events, cumulating in the Widening Participation Facilitators' training sessions developed and delivered by two of the core SUPI team, based on the previous training they had offered in previous years of SUPI.

5. **Impact on ECR's career development and understanding of the work environment.**
   This impact goal relates to our aim of supporting researchers, to develop the transferable and career management skills in the context of a work environment, and to widen their own professional development horizons and to expose them to the world of work beyond HE. Throughout SUPI we have sought to develop ECRs' transferable skills, particularly in the field of employment skills and pedagogical strategies, both experientially and through targeted training activities.

   > "The importance of public engagement by researchers and their host universities is becoming increasingly well recognised, and in some cases is even a requirement to secure funding. As an ECR, gaining experience of public engagement (such as the experience I gained through EPEE) will be invaluable as I attempt to further my career". (Science and Maths ECR)

An ECR from the Philosophical Dilemmas theme reflected on "the difficulty of designing activities to suit all students: some found the activities set interesting and challenging as a taste of university-level research, while others wanted more active and hands-on tasks". A Science and Maths ECR noted how SUPI has provided a great opportunity for ECRs to apply and improve skills in public engagement, particularly for young audiences, forcing him to condense his work into an accessible format that is easily understood and was engaging.

One of our resources was an employability statement, highlighting the keys skills ECRs will gain as participants in the project (which can be used to support job applications).

The majority of respondents evaluating our various training events felt more knowledgeable about the current school context in England, and more aware of the Widening Participation agenda.

The EPEE legacy website hosts a range of resources for ECRS with training on how to communicate with teachers and students; and on understanding school contexts, as these are areas which the project has highlighted as in need of focused support. It will signpost how partnership work can be used as evidence of the University of Exeter's career progression criteria.

In terms of practical tangible impact the working on the project has:
- ❑ strengthened one ECR's application to become a British Ecological Society Ambassador;
- ❑ resulted in a successful application to the Royal Society for funding of a Royal Society Schools Partnership Grant;
- ❑ enabled a number of Science and Maths ECRs them to become STEM ambassadors.
- ❑ Involvement in EPEE has been cited by a number of junior lecturers to show they have met probation and progression criteria and as part of HEA fellowship applications.
- ❑ Both the Transitions to University and the Sex and History projects are being developed into a REF2020 Impact case-study.

6. **Embedding activity into the university**
   A principal focus throughout the project but particularly in this final year has been the development of a project legacy with a sustainable future. The University's Vice Chancellor's Executive Group is fully aware of the project and has provided active support: a post of Engaged Research Manager has been created which is designed to bring together, co-ordinate and develop the various Catalyst projects which the University has held. This has led to the establishment of an Engaging with Schools working group which brings together not only the SUPI projects but also other projects where university researchers are engaged with schools to

adopt a more coherent approach. For example, the group has considered whether we need to develop guidance or protocols to address the ethics of research with schools.

One focus throughout the project has been on the Widening Participation agenda. Central to this has been the partnership working with the Ted Wragg Multi-Academy Trust to look at how to develop a 'deep partnership'. Building on the experience of the project, the partnership set out to consider what structures and ways of working might support schools –university partnerships which had depth and sustainability. This has involved creating a model Memorandum of Understanding for schools partnerships which outlines the responsibility of the school and the university, and piloting tools which other schools could use, such as an aspirations questionnaire. This partnership working was at the heart of a high-level meeting and dinner hosted by the Vice-Chancellor Sir Steve Smith, and attended by Lee Elliott Major , CEO of the Sutton Trust and now appointed as an Honorary Professor in the Graduate School of Education, local headteachers, local councillors and business partners. The purpose of the dinner was to consider how the university and the city schools could work together more closely. In addition, the university strategy on Widening Participation has been discussed in a number of core team meetings and through the Coaching and Mentoring training days (as described above).

The impact of the SUPI project on the University's engagement with Widening Participation has been substantial.
The University is funding a PhD student to investigate Widening Participation in schools in the South-West, focusing on white working class students, and specifically investigating the nature of their decision-making and how the university interventions influence (or not) this decision-making.   The university has supported the Graduate School of Education in appointing a Professor in Widening Participation and Social Justice to lead and develop an emerging research group focussed on widening participation and social justice. This research group will include members of staff and who have worked on the SUPI project, the University's Widening Participation teams and the WP PhD student. As a consequence of SUPI engagement, we have successfully bid for two new projects: HEFCE's Catalyst Funding looking at the differential outcomes of WP students at university (*Transforming Transitions*); and an OFFA grant to investigate the effectiveness of their new guidance on university evaluation of outreach activity. Both of these projects have full University support, including matched funding, and Deputy Vice Chancellor direct engagement.

A key project legacy related to this objective has been the creation of a school specific section on the project legacy website (which was launched in April 2017, hosted by the University of Exeter) with material for teachers to use with students. The videos and information provided are intended for use by teachers within the classroom to help students understand better what a University does and why they might like to go onto study at a University. They includes Careers Education resources (eg. Lead Science and Maths academic Lecturer in Bioscience Sarah Hodge from the University of Exeter talks about her journey to becoming a scientist and all the doors that it has opened up for her) and "What is research" resources whereby some SUPI project staff discuss what is meant by research (eg. History teacher David Brown talks about the hidden value of research and how it can develop key transferable skills).

b) Please summarise any influence your SUPI project has had on your institution, its culture, or that of any other institutions, cultures and projects/initiatives.

- ❑ Project legacy website, hosted on university website, which provides dedicated guidance and resources for academics and schools working on collaborative projects framed around research. http://socialsciences.exeter.ac.uk/education/research/projects/epee/
- ❑ A named role at the university responsible for coordinating engagement activities and establishing links between researchers and schools. (Role title: "Engaged Research Manager")
- ❑ A named role at local Multi-academy trust (school) responsible for coordinating engagement activities and establishing links between researchers and the trust schools. (Role title: Multi-academy trust university liaison lead)
- ❑ The establishment of a "Engaging with Schools" working group in the University of Exeter headed by the "Engaged Research Manager" and aligned with the newly formed department of Innovation, Impact and Business.

- ❑ The establishment of a "Graduate School of Education Exeter Partner Research Community" providing an outward facing GSE research profile and offer to schools and others.
- ❑ University funding a PhD student in Widening Participation to investigate young people's decision making re: university
- ❑ University recruited a professor in Widening Participation and Social Justice to lead and develop an emerging research group focused on these areas.
- ❑ A session included in the university's Professional Certificate in Academic Practice, a mandatory course for all ECRs, on Widening Participation.

4: PUBLICATIONS AND PRODUCTS

a) Please list any publications that have resulted from your SUPI project

Black, A. (2016) *School:university partnerships – past, present and future* (Submitted for award of Postgraduate Certificate in Academic Practice)

Royle, M (2015) School-University Partnerships Initiative, *Education in Science* 260, p.32-33. Historical Association Conference

Hilliard, D. & Brown (Under review) Argue to think *Teaching History*

A. Black, (in draft) School:university partnerships – past, present and future (for submission to *Journal of Further and Higher Education*)

b) Please list any products e.g. artistic, creative or educational material outputs that have resulted from your SUPI project.

Partnership paperwork/proformas:

- Memorandum of Understanding ("designed to ensure clear understanding of the commitment involved in participation in this partnership and to clarify the responsibilities of each party involved").
- Calendar tool (adapted, with thanks to University of Southampton)
- Project planning grids for school and university staff to work through together when planning sustainable partnership work
- Lesson plan/evaluation proforma.

Safeguarding information:

- Professional conduct guidelines
- Safeguarding information

Evaluation material:

- ECR reflective log
- Black & Featherstone (2014) *Evaluation tools.* University of Exeter
- Aspirations questionnaire (2 versions)

Researcher training material:

- How to plan lessons on-line presentations (Lesson planning for engagement, Lesson planning pedagogy)
- School contexts on-line presentation
- Managing behaviour/ managing group work on-line presentations
- Employability statement, highlighting the keys skills ECRs will gain as participants in the project

School/teachers training material:

- What is research? videos
- hidden value of research video

Careers resources:

- Female engineer video

- [How University can open up doors?](#) Video
- [What is Philosophy](#) video
-

Showcase resources:

- [About EPEE video](#)
- EPEE project ["making research accessible"](#) video
- [Written case studies](#)
- ["Transitions project"](#) case study video
- ["Argue to think" case study video](#)
- [EcoSoc case study video](#)
- [Families open day video](#)
- [EPEE Plenary conference video](#)

These resources are publicly accessible on the EPEE website which also contains additional information about each of these resources alongside a commentary on their use.
http://socialsciences.exeter.ac.uk/education/research/projects/epee/

This list excludes lesson plans/teaching resources and games developed by ECRs and teachers in part due to Intellectual Property Rights and the personal, context specific nature of these resources.

5: AWARDS AND RECOGNITION

Please list any awards or recognition associated with your SUPI project

Royal Society Award for Mullion

6: COLLABORATIONS AND PARTNERSHIP

Please provide details of any significant collaborations and partnerships that have resulted from your SUPI project

As described above: Ted Wragg Multi-Academy Partnership; EcoSoc; Argue to Think collaborations; university working groups.

The Ted Wragg Multi Academy Partnership. The Ted Wragg multi-academy Trust currently consists of two secondary schools, one all-through campus and a large outstanding primary school, all located across the Exeter geographical region. By engaging with the Ted Wragg multi-academy trust in our deep partnership model we worked with Cranbrook Education Campus (an all through school in a new town close to Exeter); Isca Academy and St James School. These schools have high levels of socially-disadvantaged students.

We sought to embed the deep partnership within the university and the schools involved in the trust. The PI and Co-I worked closely with the Multi-Academy Trust University Liaison Lead (Steve Farmer, a head teacher in one of the trust schools); the Student Recruitment and Widening Participation Office; Curriculum and Work-related Learning Office; and Public Engagement department as well as with a named contact within each.

Steve became part of the EPEE core team and was an integral part of steering the project, meeting regularly with the PI and Co-I. In these meeting we drafted the memorandum of understanding and partnership planning and evaluation protocols. It was Steve who introduced the idea of a Families' University Day and we developed the plan for the day together.

As a head teacher in a new school Steve has made many contacts with the university, beyond those offered by EPEE, and because of this we have been able to give a wider perspective of what the university offers on the project website. Additionally, we have been able to direct Steve to other departments and projects, creating links that continue beyond the end of EPEE.

Steve has been consulted as to what content of the legacy website would be beneficial for schools to see and was tasked with evaluating and providing feedback on the final draft website before it was launched.

> "The deep partnership link established between the Ted Wragg Trust and the University of Exeter via the EPEE project has allowed our students to experience a number of critical interactions and benefits. Through the collaboration our students have benefited from weekly visits from undergraduate students to support with homework and raise aspirations. Students and their families have visited the campus to explore University life and find out more detail. A number of undergraduates have spent time in lessons supporting students which has also benefited them on their journey to becoming future teachers or educators. Through the project our year 7 students have also benefited from a hands on conservation workshop via Ambios and Post grad students. We have developed and implemented an improved memorandum of understanding to ensure all Trust schools working with the University are able to maximise their interactions and have a summer school planned for the summer focusing on sustainability and conversation. We will also continue to engage with the undergraduate student mentors and hope to engage with more researchers. Developing this dep partnership has enabled these amazing interactions to take place which mutually benefit both our students and the University undergraduates, postgraduates and researchers." Stephen Farmer, Multi-academy trust University Liaison Lead and Head of Secondary, Cranbrook Education Campus.

The lessons we have learnt about the deep sustainable partnerships are captured in 3 videos (not yet referred to):

- RELATIONSHIPS

Reflections on relationships between school and university: Where partnership works well there is a mutual understanding of and patience with each other. It is important to take time to build relationships, with named members of staff. The embedding of partnership work within the culture of institutions is key, rather than just being a tick list of "should do's". Listen hard to teachers – "What do they want from us", and learn from them, using their experience to help you tailor and develop your materials and engagement style. This can be facilitated through a key contact point at the university (in the case of the university of Exeter this is the "Engaged Research Manager", who can broker relationships between schools and researchers/university departments. Universities and schools are complex places, and our website goes some way towards making those complexities easier to navigate, allowing more connections.

- LOGISTICS

Reflections on logistics: Over the project it has been apparent that successful partnerships recognise that as well as a level of commitment to the partnership, a level of flexibility is needed – Look for what is do-able, be pragmatic: "It has been really helpful when both parties work together to find an activity and a topic and an angle on the researchers work that has been useful to both" (Nick Givens, Education lead).

Both schools and universities work to deadlines and targets, so there is a need to align timetables and calendars when planning partnership work, as well as to be mindful of academic year, of the curriculum and of the need to find funding for some elements of partnership work.

- IMPACT

EcoSoc:

Mullion EcoSoc is an Ecology club at Mullion Secondary School, Cornwall. It runs at lunchtime and occasionally after school. A group of 15-20 pupils of a mix of ages regularly turn up on a voluntary basis to learn about a wide range of topics. Each session lasts for 45 minutes, researchers from the University of Exeter come to the club and

talk about their scientific research, including getting the pupils to do activities. The lead teacher (Marieke Royle) stays to support the delivery of the session.

Since the topics are often not directly linked to the curriculum, this club provides an invaluable outlet for the students to gain and develop interests in subjects that enhance those covered in lessons. "The lovely thing is you can do stuff beyond the syllabus, which is just brilliant. You can get the kids to come in and do things that they're not supposed to be learning to pass exams, they're doing it because it's fun, and they realise that science is exciting. It's a fantastic tool to have because it makes science real, rather than just learning for exams. It's people doing science and finding out about science." (Lead teacher, Marieke Royle)

Mullion EcoSoc started in January 2014 and has now developed a strong reputation amongst young research scientists at Exeter University. This is because members of EcoSoc ask such unexpected but searching questions, they often give the researchers new ideas! A key factor influencing early career researchers interest in Mullion School's Ecosoc in particular is the well-established nature of the group and the supportive atmosphere, which allows them to feel comfortable testing new resources. Allowed our researchers to develop and trial new sessions and learning activities, which they will hopefully be able to take further to more schools around Cornwall and beyond. The teachers we have worked with have been extremely useful in providing feedback to our researchers to help make their resources as effective as possible.

Argue to Think collaborations

The Argue to Think Project is a development of PhD research by ECR Diane Hilliard which was specifically designed to help Sixth form A level History candidates improve both their written and verbal arguments – so it has immediate relevance to most History teachers and their students. The research focuses on the bridge between spoken and written argument and is underpinned by the most recent and extensive theoretical research into dialogic education, informal and persuasive argumentation. This workshop for A-Level students was developed by Dani in her PhD get students to understand the links between written and spoken argument and apply this to writing. This approach has the potential to raise pupil grades, and make aspirations to university a reality. (See http://www.arguetothink.com/).

Dani works with schools in a bespoke manner, in the example reported on here to help solve a recognised problem that Sixth form History students face - A level students find it difficult to find suitable criteria to evaluate historians' views. This was seen as an opportunity to for teacher and researcher to work together to find a working solution that makes it easier for teachers to help students. The researcher designed a lesson with input from the curriculum manager of Modern History to help students understand the concept of using valid criteria to discuss the differences between historians and their interpretations of the same event. The researcher, as a skilled A level History teacher, delivered the lesson which comprised of a series of interactive activities designed to engage the students in collaborative group work and discussion. The researcher delivered the session twice and each time was observed by one of the teachers involved in the research. These teachers then went on to deliver the 'model' session to the rest of the History candidates using the materials and ideas generated by the researcher. This was followed by evaluative discussions between the researcher and school staff. The discussions have been frank, open and extremely useful to the researcher and equally of value to the teachers who are keen to carry on working with Argue to Think for the benefit of their students. One teacher reports that the intervention "has been taken into standard classroom practice".

University level collaborations

Following the successful running of our Widening Participation Facilitators' training sessions (Year 4) Nick Givens (EPEEs Technology and Engineering Education lead) has worked with University and College Level Widening Participation Units to explore the possibility of embedding similar workshops into Exeter's WP strategy, funded by WP budgets. A similar format to the one piloted through EPEE has been constructed: a standalone induction to outreach work, taught over two half days at least a week apart, jointly planned and taught by two GSE academic staff. The rationale for this model is that it worked successfully and was well evaluated when piloted as part of EPEE. Two half days worked as a viable minimum; the one week gap allowed each delegate to plan a microteaching task that we set during the first half day and to teach it during the second half day. Team teaching is an important aspect of the model as our reflections showed it facilitates evaluation and development; provides short term resilience (if one tutor is unavailable at short notice a course would not have to be cancelled); provides

longer term resilience (formal and informal knowledge of the content, pedagogy, development priorities, challenges, opportunities, contacts would not be held uniquely by a single academic).

The December course was attended by eight PGRs and one E&R colleague; with wider marketing and longer notice an estimate of 30 delegates per academic year would seem reasonable for a first year of operation. Leadership would necessarily involve WP colleagues at University and College level, and with the GSE Centre for Professional Learning

In the longer term there is a possibility of offering additional courses, perhaps focusing in more depth on a single aspect of outreach work. One example discussed would be to equip PGRs / research colleagues to *relate* the ideas behind their own research to relevant school curriculum content when working with pupils / teachers. This could be facilitated, either through:

- subject specific CPD in which a subject specific GSE teacher-educator familiarises a group PGRs / research colleagues from one discipline with the 11-14 /GCSE /A level curriculum in a relevant school subject

- generic CPD in which a GSE teacher- educator teaches PGRs / research colleagues from disparate disciplines how to locate, analyse and interpret key curriculum documentation

7: FURTHER FUNDING

Please list all further funding that your SUPI project has leveraged across its lifetime

WP PhD Studentship (university funded) £61K

ESRC funding Festival of Social Science funding, 2014 and 2015

Royal Society Grant (approx. £3k)

8: SKILLS AND PEOPLE

a) Please list any skills related developments that have taken place as part of, or as a result of your SUPI project

When	What	Who for	Who by	Content
Year 1	Coaching and Mentoring day	Project ECRs (repeated in Cornwall for Science and Maths ECRs, repeated later in the year for newly recruited ECRs)	Education leads from GSE	Introduction to key issues about school and the curriculum, learning, and effective interaction. Introduction to lesson planning.
	Evaluation strategies training	All project staff (during core team meeting)	University head of public engagement and the EPEE project manager	What effective evaluation looks like. How to collect evaluation data beyond a questionnaire.
Year 2	Coaching and Mentoring day	Project ECRs, ECRs across the university who were interested in presenting their research to schools.	Education leads from GSE	Various pedagogical strategies introduced/practised including: how to foster 'behaviour for learning'; 'Rich questioning' and learning dialogue in the classroom; and an introduction to lesson planning.
	"Doing it in public" workshop (one of a series of 4)	University of Exeter PhD students	EPEE project manager	Introduction to EPEE. In what ways can our research interact with educational groups outside of universities?

	Widening Participation training	All project staff (during core team meetings)	Principal Investigator, Education leads, Widening Participation Officer	University Widening Participation strategy discussed, associated discussion around the school level policy concepts of Unseen Children, Narrowing the Gap and coastal/rural underachievement.
Year 4	Widening Participation Facilitators' training sessions	ECRs across the university who were involved in Widening participation engagements.	EPEE project manager, Technology and Engineering Education lead, College Widening Participation Officer	Day 1: Aims of Widening Participation; teaching & learning strategies and questioning techniques. Day 2: contextual information about schools and curricula; tips on how to engage students; evaluation techniques to use in school. Both days introduction to lesson planning.
	Seminars as part of our plenary conference	key stakeholders: school teachers, headteachers, Early Career Researchers, EPEE staff, and the university's Widening Participation and Public Engagement teams	Science and Maths school lead; Technology and Engineering Education lead; "Engaged Research" Manager, EPEE project manager	"Mullion school: How has EPEE helped?" "The journey from research… …to engagement with young people" "School contexts & pressures" "Supporting Public Engagement with Research" "Developing a working model of a mutually beneficial partnership."

This does not capture the informal experiential training gained by observing school teachers engage with classes, and having teachers supporting planning and evaluation of engagements.

b) Please list any secondments placements and internships to or from other organisations associated with your SUPI project

9: OTHER

Please state here any other information associated with your SUPI project that you would like RCUK to know as part of final reporting.

The majority of our engagements have been with state-funded schools but have also worked with independent schools. One of the academy schools we have links with is a selective school. The schools we engage with vary wildly in terms of the numbers of students on "Free school meals" (FSM), and the number of students with Special Educational Needs (SEN). Between 4% and 19% of the population in the various schools have a statement of SEN(or have an EHC Plan under the new Code of Practice) or are at School Action + (SEN Support) (the national average is 7%). This includes the grammar school. The grammar school has 2% of its students on FSM, the other schools have between 6% and 42% of students on FSM – the national average is 16%.

Figure 1 below illustrates the original conception of the University of Exeter SUPI project which is described in section 1. Figure 2 illustrates the deep partnership model. In this model the two named central contacts broker the links between the key groups the partnership is for (school students, researchers, teachers, university students). There are "background influencers" who can help and support partnership work through training and advice, resourcing etc (subject/education experts, senior management, widening participation groups and so on.) Any engagement is reliant on environmental factors, such as flexibility and understanding; resourcing and commitment; planning and evaluation.
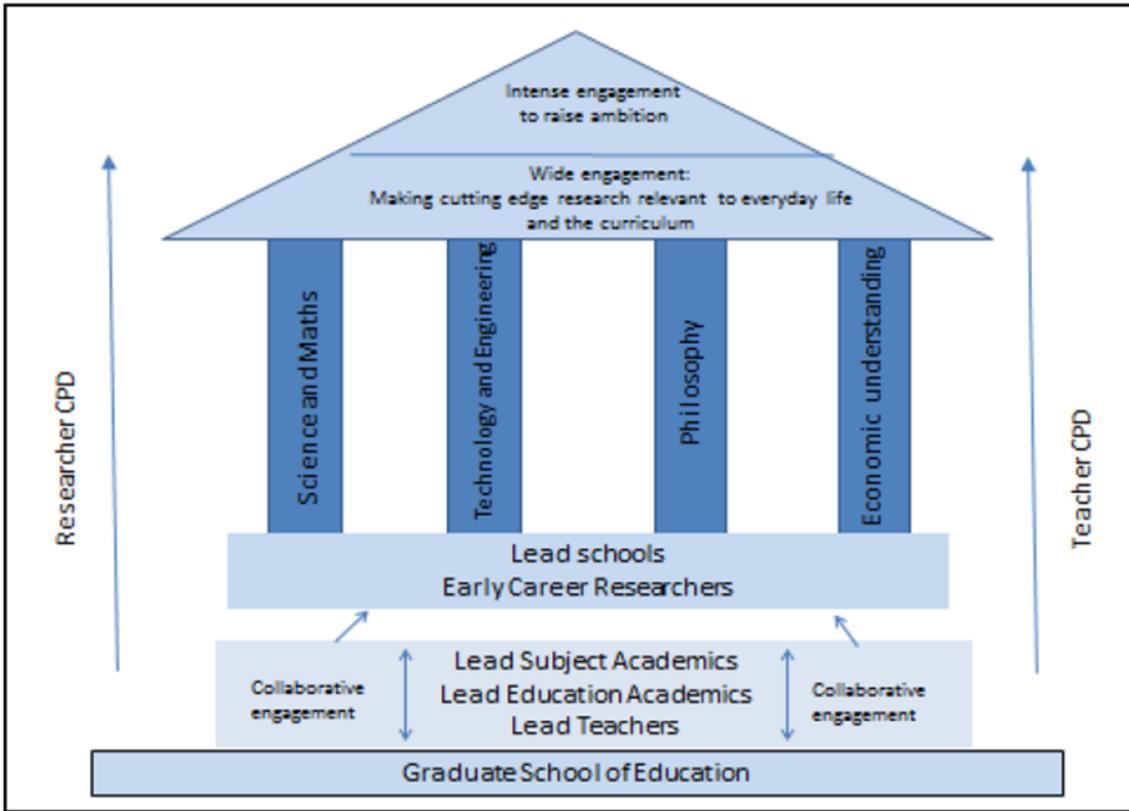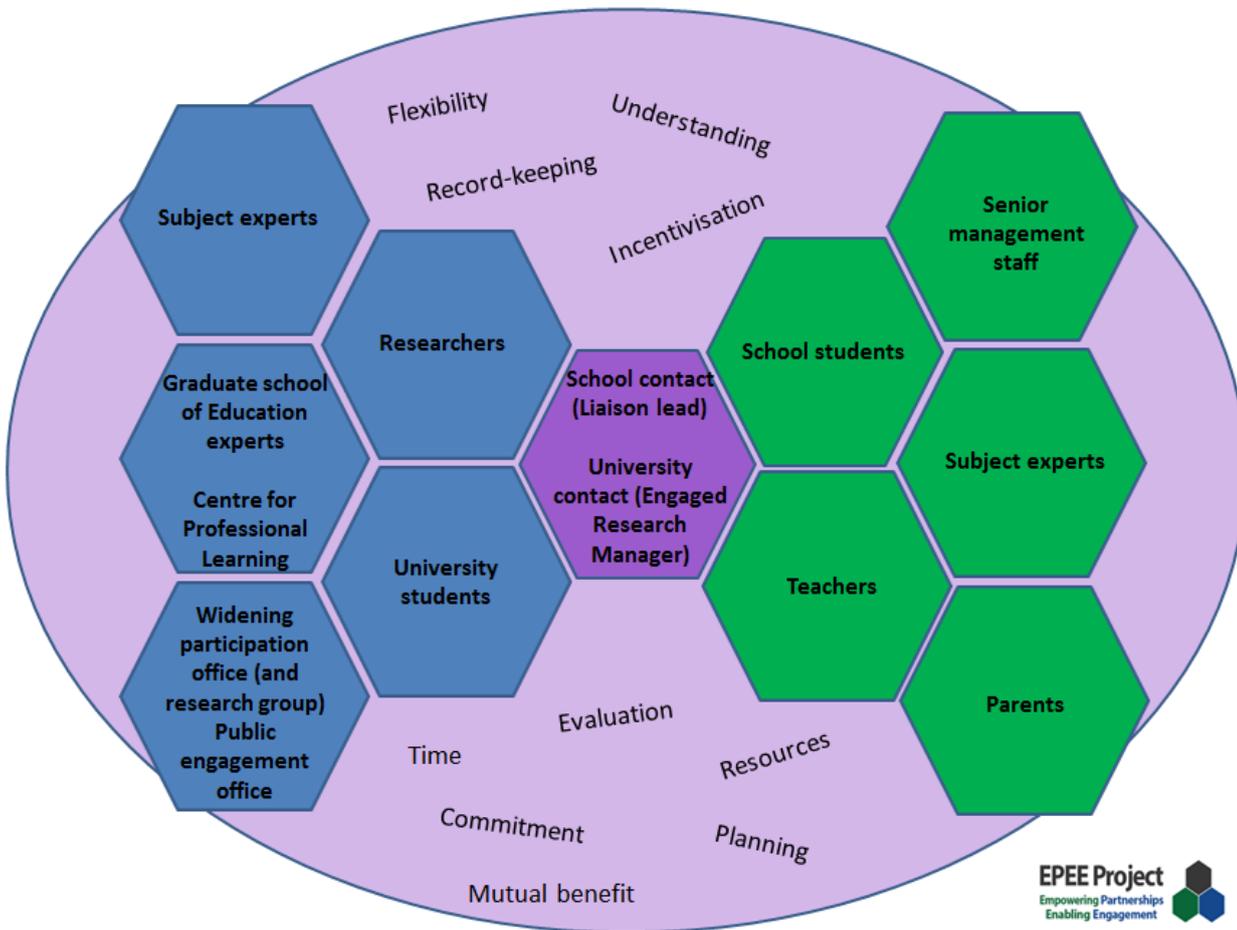
Figure 1: Distributed leadership model of EPEE as initially conceived.

Figure 2: Deep, sustainable partnership model.