COLLABORATION BETWEEN HEIS:

An outreach practice guide

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Welcome…

…to this short guide on collaborative outreach practice. We've pulled together some advice, hints and tips from a variety of collaborative projects to help you in building your own multi-HEI outreach projects. Every site has its own identity, so this is not meant to be prescriptive, but hopefully will prepare you as you set up your project.

Why Collaborate?

Collaboration isn't always easy, but it is very worthwhile. When delivering outreach programmes a variety of partners can enhance and improve your activities. Individuals will benefit in all the ways you would assume[1], but in addition you can expect:

- Economies of scale
- Wider-spread delivery with a joint message
- Wide expertise base (professional staff, academics)
- Wide range of research backgrounds
- Raised profile for individuals and the project
- Reinforcement of altruistic objectives
- Networking opportunities

On top of this experience tells us that students respond well to activities that are pure outreach, not an obvious recruitment exercise. This can lead to them improving their opinion of the institutions involved.

[1] See the RCUK guide *Engaging Young People with Cutting Edge Research* http://www.rcuk.ac.uk/documents/scisoc/SchoolsPolicy.pdf

and the NCCPE guide *The Engaging Researcher* http://www.vitae.ac.uk/CMS/files/upload/The_engaging_researcher_2010.pdf

Choosing Partners…

The right partner will depend on the focus of your project

Dedicated outreach staff are a useful first contact in an HEI

Research led projects should include other HEIs that already collaborate with your research groups or departments. This may be part of the impact section of a joint research grant, such as the Quantum Computing exhibit produced by UCL and University of Surrey for the Royal Society Summer Science Exhibition as part of their EPSRC grant. The content of the outreach is tied very closely to a precise area of research.

Locality led projects will need partners that are in specific locations for delivery if the funding or drive comes from association with a specific area. If you are having trouble identifying the right partner you might want to consider delivering the project in more than one area, or more than one subject. You might also want to develop activities in partnership, but deliver through one agent. An example of this may be a science festival, involving all HEIs in a specific area.

Subject focussed projects could include any partner with an interest in that subject area, and be built on existing contact. Partners might be other HEIs in the UK, or even abroad. These collaborations are based around a wider topic and fundamental or schools content knowledge, such as basic astronomy, rather than being specifically linked an area of current research. The SEPnet partnership is hinged on a joint interest in the whole of physics, whilst individual projects within our programme might be more focussed on specific research areas.

When contacting a new partner, it is useful to contact the outreach officer, or academic responsible for outreach. They can give you an idea of how suitable the activity would be for their HEI and give information about the correct person in their institution to give approval.

Don't forget to include external partners that may also have expertise in your area and they may also have access to other sources of funding. The choice of external partners will also depend on your project focus. There are many educational trusts and charities with a range of remits, including subject based, socio-economic based, disability, and more. For example SEPnet regularly work with STEMNET, the Institute of Physics and the Ogden Trust as they are linked to our subject area and our target audiences.

Try to avoid…

Direct recruitment activities - this will put you in competition with your partners and as we said before, students do not enjoy obvious recruitment exercises[2].

Mixed targets -is this schools work? Public engagement? For NEETS? Or Gifted and talented? An intensive course for a few students, or high numbers with less contact time? It is difficult to create an activity where one size-fits-all so it is very important to identify a specific target audience and ensure that the activity is appropriately designed. If a school audience is intended, teachers should be involved in the planning stages.

Don't assume all ideas are new

Make sure you have a good sounding board of experienced people appropriate to your target audience

Practice and theory sharing should go hand-in-hand

Key Actions for working in partnership…

GET YOUR STRUCTURE SETTLED QUICKLY

Clear reporting lines and allocation of responsibilities are essential for any outreach project, but particularly for collaborations. Work out what support is needed in the proposal stage. Any project will need some staff time allocating for management and delivery. This may be provided from existing personnel or, depending on the scale and funding, from extra positions to be recruited. The larger the collaboration, the more necessary it will be to add new staff to administer the project. Make sure that if existing staff are taking on new responsibilities that they are able to be rewarded for their work, and that their managers are able to see what the objectives for their work are. Essentially, make sure that any workload is manageable.

A steering group of strategic personnel to ensure buy in from all partners at a high level can be very helpful. Additional funding applications or dedicated staff recruitment should be considered by the strategic personnel early on. Many projects with external funding suffer from prolonged recruitment processes and late appointments. To avoid this issue, the project should be clearly outlined before recruitment begins.

SET YOUR TARGETS, AND STICK TO THEM

[2] This was a key finding of the London Engineering Project, who carried out educational research alongside their delivery programmes. You can find out more at http://www.thelep.org.uk/hei/lepresearchpapers

HE is a very changeable environment, but your project cannot address all issues and all audiences. Outline your shared aims for the project and how you will deliver against them, and then stick to them. The activities will be more effective if they are specifically designed with a target in mind. The aims and targets will also provide a bench mark for evaluation. If one partner needs to re-focus or change priorities they will have other opportunities to do so. External funding is usually linked to the stated targets and will require evaluation against these and any changes in targets will have to be cleared with the funders.

ASSIGN WORKLOAD CLEARLY

Unclear actions lead to no-one delivering against them. In collaboration it is easier for actions to be assumed to be happening at a different HEI. Be explicit, and ensure all meetings are minuted appropriately for reference by all partners. If there are no dedicated project staff in place, it should be made clear who is leading on the project and who is expected to take on what duties. With everyone working in different places, it is important to be aware of what everyone else is doing and to communicate updates regularly. It is also necessary to be aware of pressures at other sites to ensure reasonable time scales are used. For example, if you are using someone else's workshop, what other projects is that department working on? Is the workshop going to be busy with undergraduate experiments? What else are the staff involved working on? Much of this is general good management practice, but when your team is dispersed at different sites clear communication of this practice is essential.

ESTABLISH DEADLINES, BUDGETS AND REPORTING STRUCTURES

Most collaborative projects have fixed deadlines, even if it is just annual reports. Be clear in what you need to have done and by when and how this will be reported. Each partner is likely to have different internal deadlines and pressures so a shared calendar of key dates can be a real help.

However your project is being funded you will need to establish clear cost implications for each partner. Is one site acting as banker? Is each partner contributing equal funds? How are you accounting for in-kind contributions? Setting the scene early on can prevent misunderstandings and tension between partners later on.

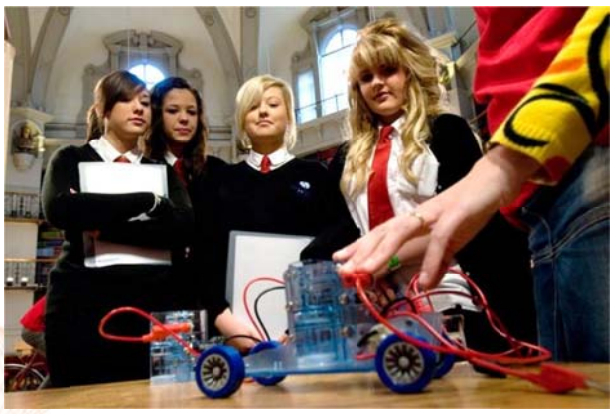
LEARN FROM OTHERS, AND SHARE YOUR EXPERIENCES

No matter how innovative your project is it is likely that someone else has experiences that could help you with your delivery. Go to conferences through the Higher Education Academy, NCCPE or subject bodies (IOP, RSC etc.) to see what others have been up to. They will be pleased to hear about your project too.

Together you can…

- Enhance and enrich the National Curriculum
- Share practice and theory, including mutual evaluation
- Share messages, such as promoting STEM and increasing access
- Raise the profile of your subject more widely than working alone
- Share resources, expenses and workload. This allows larger, more expensive equipment to be purchased and larger scale events to be run
- Be cost effective by reducing the workload for any one institution or multiplying the number of contacts your project can reach

Case Study: The GCSE Programme



The SEPnet GCSE Programme consists of a half day taster activity for year 9 students and a series of curriculum linked workshops to support the GCSE curriculum and provide practical opportunities for all students. The programme has been running for 4 years, with improvements made year on year based on teacher feedback. Working as a partnership of universities has allowed us to have a wider geographical reach with our activities. We have been able to buy larger, more expensive equipment as we have been sharing it between our partners. We have shared the best practice workshops at each of our sites and rolled it out to all the partners so that we can offer them more widely. The wider reach of the programme allows it to be higher profile and raise the profile of physics further in our region.

CHOOSING PARTNERS

The GCSE programme is part of the SEPnet (South East Physics Network) outreach programme. The partners were therefore preselected as part of the wider SEPnet collaboration, mainly for reasons of proximity and based on existing links. As there was a wider collaboration and existing links, it was easier to make contact with the different partners. The proximity of the universities in the collaboration makes it easier to meet up to discuss the project before visiting the different venues. Whilst the dedicated outreach officers at each site were expected to be part of this project, it was also important to bring in academics and technicians from each site, which was facilitated by careful timing of meetings to avoid term-time commitments.

GET YOUR STRUCTURE SETTLED QUICKLY

The SEPnet collaboration provided funding for a 0.5 outreach officer position at each of the six partners, a 0.5 co-ordinator for the GCSE programme and a full time Outreach Director. This programme started early in the collaboration, with the result that the outreach officers were not yet in post in all the universities. This made the project harder in the early stages as there was no specific contact person with dedicated time for the programme. The academics at the sites with no officers were very busy and making arrangements for the

programme with them was harder. There was also no Director of Outreach which meant that the officers were not used to communicating with each other and reporting centrally for projects. As the structure came into place and the lines of communication and reporting were made clearer, the programme ran more smoothly. Funding was held by one of the partners, with specific pre-agreed amounts being distributed each year to the others.

ASSIGN WORKLOAD CLEARLY

With a collaborative project, the workload can be split up amongst the sites. We used workshops at our partner universities to create some of the exhibits for our taster event and officers at the all the sites contributed to putting together the workshop sessions. The GCSE programme had a specific member of staff employed to co-ordinate the programme and they were responsible for communicating the work and supporting the local sites in their delivery.

ESTABLISH DEADLINES AND REPORTABLES

The workshops that staff at other sites prepared needed to be ready with a certain deadline for rolling them out to all sites. Interim deadlines were established to have reached certain points with reporting due at regular intervals to ensure the final deadline was reached. All evaluation data needed to be returned to the project co-ordinator to be analysed to allow improvements to be made and reports to be produced. The project co-ordinator was responsible for developing the evaluation plan and administering through the other officers.

LEARN FROM OTHERS AND SHARE YOUR EXPERIENCES

We consulted other organisations when planning the programme such as the Institute of Physics and STEMNET and got their input on the overall programme structure, as well as some of the specific activities. Through the delivery of the activities, the HEIs have shared their results and any issues they have found to improve the activities and the schools' experience. Since developing the programme and working on improvements, we have shared information about what we have learnt through the HE STEM programme and other conferences to improve the experiences of other HEIs doing outreach.

SET YOUR TARGETS AND STICK TO THEM

Different targets require different activities and so it is important to have specific targets in mind to allow the activities to be suitably designed. Set goals and targets also provide a benchmark for evaluation. The GCSE Programme was set up to support the teaching of physics in GCSE science and raise the uptake of A-Level physics. Qualitative information from teachers indicates that this has been successful; however, a longer term evaluation against this target has yet to be carried out. This was intended to be achieved through providing enjoyable activities that are curriculum linked to improve achievement, as well as offering some links to careers. The programme has stuck to this remit and not extended to working with A-Level students or providing CPD for teachers or providing activities that are not curriculum related. A-level students are a different audience with different needs and would therefore need a separate range of activities and it would not be best use of the GCSE resources to spread them in this way. CPD for teachers is already provided by the Science Learning Centres and it was more useful to support other programmes already in place than to develop our own.

Other examples…

Science Van/ Gwyddfan took the expertise and evaluations from Science Circuit, the Institute of Physics Lab in Lorry, as well as the IoP Physicists and Primary Schools experiments to deliver a new set of outreach experiments in primary schools in the Communities First areas of Wales, concentrating on biology, forensics, geology, earth and environmental sciences.

COLLABORATORS: Aberystwyth University and Institute of Physics. Rolled out to all Welsh universities.

http://www.aber.ac.uk/en/widening-participation/schools/stem/science-van/

http://www.labinalorry.org.uk/

http://www.iop.org/activity/outreach/resources/pips/index.html

The East Midlands Space Academy offered curriculum focused programmes in science, technology, engineering, geography and environmental science for students from Key Stages 3 to 5. It also offered teacher conferences and INSET sessions, careers events and the chance for East Midlands' students to win places at national and international space schools.

COLLABORATORS: University of Nottingham, East Midlands STEM partnership, National Space Centre, University of Leicester, Science Learning Centres

http://www.emstempartnership.org.uk/WhatIsSTEM/EmdaSTEMProgramme/The+Space+Academy/

Useful Contacts:

HE STEM
www.hestem.ac.uk

SEPNET
www.sepnet.ac.uk

HE Academy

http://www.heacademy.ac.uk/

National Coordinating Centre for Public Engagement

www.publicengagement.ac.uk

National School Curriculum

http://www.education.gov.uk/schools/teachingandlearning/curriculum

National STEM Centre

http://www.nationalstemcentre.org.uk/elibrary/

RCUK Strategy Unit

http://www.rcuk.ac.uk/

Resources and guides

http://www.rcuk.ac.uk/per/Pages/Bestpractice.aspx

VITAE

http://www.vitae.ac.uk

The National HE STEM Programme supports Higher Education Institutions in the exploration of new approaches to recruiting students and delivering programmes of study within the Science, Technology, Engineering and Mathematics (STEM) disciplines.

SEPnet Outreach aims to bring the excitement, innovation and knowledge of Physics to students, teachers and the public. Through events and activities delivered both jointly and by each of the partners, SEPnet provides unprecedented access to and promotion of Physics in the South East.