Engaging academics in schools outreach

How, why, where, when, who and what???
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- Physics (with Astrophysics), Manchester
- Art Gallery and Museum Studies, Manchester
- SETPOINT Greater Manchester
- Royal Society
- SEPnet
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- Chair, Science on Stage UK
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Summary of recommendations – Institution Focussed Study

1. That the CPE continues to prioritise reward and recognition processes
2. The CPE should work on creating better understanding of the spectrum of public engagement activities
3. The CPE makes clear the institutional priorities for public engagement
4. That the CPE and Vice-Principal continue to provide leadership for public engagement with significant academic input
5. That the CPE as a resource centre should be continued until such a time as it can be demonstrated that public engagement has been embedded into the day-to-day processes of the institution.
What are the impacts of outreach activities on the scientists involved?
• Mixed methods approach
• Survey and Ethnographic case studies
• Focus on physics
• National online questionnaire
• 8 observations with follow up interviews
What are the impacts of outreach activities on the scientists involved?

• How is this perceived by the scientist?
OUTREACH OFFICERS: Looking at the list below, what do you think is the main drawback to scientists taking part in schools outreach activities?

- It makes them look bad in front of their peers
- It makes them a target
- It can send out the wrong messages
- It diverts money from research projects
- It diverts money from other, non-research, activities
- It takes up time that is better used on research
- It takes up time that is better used on other, non-research, activities
- There are no drawbacks to engaging with school-aged young people
- Other (please specify):
PHYSICISTS: Looking at the list below, what do you think is the main drawback to scientists taking part in schools outreach activities?

- It makes them look bad in front of their peers
- It can send out the wrong messages
- It diverts money from research projects
- It diverts money from other, non-research activities
- It takes up time that is better used on research
- It takes up time that is better used on other, non-research activities
- There are no drawbacks to engaging with school-aged young people
- Other

The graph shows the percentages of physicists who selected each option.
It can be seen as a waste of time by their colleagues, and make them look like they're not serious about research. Audience is not always appreciative of the outreach.

It can be detrimental to career progression due to departmental attitudes. It takes up times that could be used in others ways (research etc).

I don't think there is a drawback, but scientists/engineers may perceive a drawback.
'Too much' time spent on outreach can meet with quiet disapproval. Generally they will not be understood unless they "dumb down" the content to an unacceptable level.

A poorly trained/unsuitable scientist can actually have a negative impact on students. It can be hard to set an appropriate level for young children - I personally find it easier to explain to adults the lack of support (institutional, financial, etc.) from superiors.
Several reports have included acknowledgement of the barriers perceived by scientists who do or are thinking about doing outreach (Andrews et al. 2005, Royal Society 2006, Poliakoff 2007, Davies 2012, Ecklund 2012).

- concerns over reputation
- concerns for career
- early career researchers
- outreach activity is seen as frivolous by their supervisors.
- time constraints are reported more frequently by those who state they are in an environment unsupportive of public engagement activity, even though they had made time to participate in the activity.
OUTREACH OFFICERS: What is stopping you from getting (more) involved in activities that engage school-aged young people in science? Please mark all that apply

- There is no senior level support
- There is not enough funding
- I need to spend more time on my research
- I need to spend more time teaching
- I need to spend more time on administration
- I need to spend more time getting funding for my research
- I would have to do it in my own time
- I need to engage a different public audience with my work, rather than school-aged young people
PHYSICISTS: What is stopping you from getting (more) involved in activities that engage school-aged young people in science? Please mark all that apply

- I am already involved enough
- I am too junior
- I am too senior
- I am only in the UK for a limited period
- English is not my first language
- I feel that I am encroaching on Press Office work
- There is no senior level support
- Peer pressure
- There is not enough funding
- I need to spend more time on my research
- I need to spend more time teaching
- I need to spend more time on administration
- I need to spend more time getting funding for my research
- I would have to do it in my own time
- I need to engage a different public audience with my work, rather than school-aged young people
- I just don't want to
- Other
Negative perceptions

5 minutes – how are these perceptions created? How do we work out what is a perceived problem and what is actually happening in the department?
OUTREACH OFFICERS: Looking at the list below, what do you think is the most likely benefit to scientists taking part in schools outreach activities?

1. It improves their standing in their department
2. It improves their communication skills
3. It improves their research
4. It demonstrates the value of their research
5. It makes them a better teacher
6. It helps in securing future funding for their research
7. I do not think the scientist benefits from this activity
8. Other
PHYSICISTS: What are the reasons for why you take part in outreach activities?

- To be accountable for the use of public funds
- To contribute to public debates about science and scientific issues
- To contribute to discussions about the social and ethical issues science can raise
- To generate/ Stimulate additional funds for universities and colleges
- To recruit students to your subject
- To ensure the public is better informed about science and technology
- To raise awareness about your subject
- To raise awareness of science generally
- To increase diversity in the scientific workforce, and access to scientific careers
- To create a more scientifically literate population

There are no reasons to engage with this group.
To provide evidence of "impact"

To excite people about science. If they think this is exciting, then they will better engage with the taught material in schools and other opportunities (such as visits to Science Centres, TV programmes)

To benefit the individuals engaged with by telling them about all aspects of science

It is enjoyable

Because it looks good on CVs and for certain funding bodies.
Benefits

5 minutes – how are these benefits articulated? In a world dominated by ‘impact’ how are benefits measured? What evidence is there, and what else is needed?
What are the impacts of outreach activities on the scientists involved?

• How is this perceived by the scientist?
• What can we do to maximise the effectiveness of an activity, from the viewpoint of the scientist?
Case studies

5 minutes – What can we see from the viewpoint of the scientist? What makes an activity successful from this position?
Career length vs level of activity

Academic seniority vs level of activity

Career length and perceived barriers to getting involved

Academic seniority and changes for motivations in getting involved
What are the impacts of outreach activities on the scientists involved?

• How is this perceived by the scientist?
• What can we do to improve the interaction?
• Does it matter how we define ‘scientist’
Scientific knowledge

Professional skills and knowledge

Audience understanding
PHYSICISTS: What level is your current post?

- Professor or above
- Reader/senior lecturer/researcher/fellow
- Lecturer/researcher/fellow
- Junior/assistant researcher/fellow
- Post-doctoral researcher
- PhD student
- Technician/other support staff
- Managerial or professional
PHYSICISTS: Is your department supportive of outreach activity?

- Yes, very supportive
- Yes, fairly supportive
- Not particularly supportive
- Not at all supportive
- It varies between departments
- Don't know
Thank you!

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