

## Catalyst – supporting engaged research

#### **EVALUATION TOOLS**

This document was created for two RCUK funded projects: the Catalyst and the School-University Partnerships Initiative (SUPI). The Catalyst project aims to support a culture of publicly engaged research, while the SUPI project facilitates early career researchers sharing their research within classroom environments. Both projects require periods of reflection on practice and the tools outlined in this document are designed to help that process.

There are two roles for evaluation:

- 1. to evidence what you did (and why),
- 2. to improve practice

In both projects there is a need for people to reflect on their practice for both purposes outlined above, however, there is also a need for evaluation tools to be unobtrusive so as to not affect the quality of the experience. Many of the tools outlined here can be integrated into activities so the participants' experiences are uninterrupted.

This document covers a range of tools which the reflective practitioner might find useful. It is by no means comprehensive, but it hopefully provides some ideas on how to integrate tools for evaluation into educational/engagement activities. We also provide further reading at the end where readers can go for more information.

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# working with you

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A note on ethics: some universities feel that data collected for evaluation purposes does not require the same ethical scrutiny as for research purposes. Even if this is the case, it is worth considering the ethics of your data collection carefully. You are eliciting and capturing peoples' opinions before interpreting them and sharing them with others. Peoples' opinions belong to them so be ethically cautious when collecting evaluation data. There may also be privacy issues related to capturing and using images (moving or still) of participants.

For more information the BERA (2011) ethics guidelines set out key ethical issues to think about when undertaking data-gathering with young people, these principles can be applied to all participants. BSA's Visual Sociology Group (2006) have a comprehensive set of principles to consider when taking still or moving images as part of data collection. Canterbury Christchurch University (2008) have developed an advisory note on ethical issues surrounding the recording and use of visual images of research participants which highlights the key points to consider.



Tool	Comments/how to use	Advantages	Disadvantages	Recording
VOTING	There are many ways for participants to vote:	Snapshot of individual opinion (but doesn't capture justification for choices).  You can use proportional representation by giving participants two or three votes.  You can do a vote before and after an intervention to capture changes in opinion.	If the voting is public (where participants can see each others' choices) participants might be swayed by what their friends do. To reduce this it can be better to conduct a vote once people have had the opportunity to discuss issues. Or get participants to close their eyes before voting.  If you ask participants to vote before a discussion they may not have an opinion so will find it difficult to answer, have an abstain/don't know option.	Take photographs and write up afterwards.  Record a tally of votes for each statement/choice.
RANKING	There are many ways for participants to rank:  • Statements/pictures in a line between two extremes  DIAMOND 9: GIVE 9  STATEMENTS, PRIORITISE KEY FACTORS. THE MOST IMPORTANT FACTORS ARE PLACED TOWARDS THE TOP OF THE "DIAMOND 9". THE LEAST IMPORTANT FACTORS	Participants have to work together to develop the ranking so they expose/develop their thoughts in the process.  In Diamond 9/statements in a line a concrete artifact is produced which can be kept (however, time needs to be taken beforehand to prepare the statements — one set per group)	The group might not be able to reach consensus. If this happens – acknowledge it and record it.  Watch out for dominant characters taking-over. You might need to facilitate the exercise to ensure everyone has their say.  Justification is missing in final record. You might want to find a way of capturing some of the justification eg. through participant observation/ annotation of the final 'artifact'.	Take photos and write up afterwards.  Glue the 'diamond 9' or ranked list onto one sheet of paper. (See page 10 for diamond 9 example)

Tool	Comments/how to use	Advantages	Disadvantages	Recording
	ARE PLACED TOWARDS THE			
	BOTTOM. (SEE EXAMPLES			
	<ul> <li>Example 1)</li> <li>Standing/sitting in a line</li> <li>Facilitator moves items in response to the participants' viewpoints called out</li> </ul>			
	Mind maps allow participants to	Many children/young people are	It might be a little like school	Collect the mind maps and
MIND MAP	visualise their current understanding of an issue or topic.	used to creating mind maps, it is a tool often used in school.	work so be off-putting.	conduct analysis afterwards.
	You can use mind maps to capture change by getting participants to create their map at the beginning and then amending it after the intervention (use different coloured pens so you can see the change).  A mind map is also useful as a talking tool. Participants create a mind map which they then talk through with you and you can ask questions.  There are many online mind-mapping tools, such as https://www.text2mindmap.com/	A mix of pictures and words can be used, it is non-linear and so captures a wide range of ideas/thoughts.  You can see content, links, depth, language etc and if done pre- and post-intervention you can see how the intervention has changed these aspects.  Common themes shared amongst mind maps may be seen quickly when compared.	Creates a lot of data which needs time consuming analysis.  Not everyone thinks in this manner so can be hard for some people.  It can hard to translate the artifact into solid evaluation data.	https://www.text2mindmap.com/ allows files to be saved, printed and downloaded.  Can be used as a starting point for an interview (see separate section) by starting with the participant's perspective. The interview should be recorded, transcribed and analysed using standard qualitative analysis tools.
	Participants are given a space on which	Appealing to people who like to	Takes time and assumes that	Take a picture(s) and analyse
GRAFFITI WALL	they can draw or write their thoughts.  These work well in spaces and events	draw or comment. Is a novel way of canvassing opinion – doing	people can express themselves creatively.	afterwards.
	where people are passing through rather than in a formal setting.	something 'a bit naughty'.  Can act as an advert for your	Can generate quite a lot of noise.	Complete analysis on the artifact itself – ie, underline/colour code key words/
	Variety of mark-making tools could be provided.	project, if displayed in a public place (take care to check content	Very hard to analyse.	themes.

Tool	Comments/how to use	Advantages	Disadvantages	Recording
		however!)		
PICTURES	Participants can draw or create an image to represent their viewpoint.  You can offer a partially completed	Works well for people who prefer to express themselves in this way.  Offers an alternative to talking/writing.	Can be time consuming with people taking more time on the quality of the creation rather than what it's trying to say.	The image – unlikely that you'll be able to analyse the pictures unless you've given some clear guidance for creating the image.
	image which they finish eg people with blank faces and thought bubbles		Not everyone can create in this way.	
Рнотоѕ	Participants are given a camera and asked to record images. You can give clear instructions on what they should be taking images of (eg 'places where you' 'interesting thing we did today') or keep it broader.  You could ask one person in a group to be the photographer. Others in the	Easy and cheap to do — most people can use a digital camera.  Produces images which illustrate events when reporting/ writing up case studies.  Can display images during the event.	Participants might want to use their own camera, so you won't get image.  Lots of images may be taken, including random ones!  Consider issues of privacy/consent. Schools may have a	out why the images were taken or selected. You'll need to talk with the participants and record/write down what they say.  You'll need to find a way of
	group can ask for images to be captured or they can be a 'photojournalist'.		policy on taking/sharing pictures of children — this should be checked if working with schools.  Image analysis is a specialist skill.	prioritising the images. You might get each team to choose one or two images that really represent their experiences.
IN AND OUT	Create a picture of a person with a thought bubble and speech bubble.	Acknowledges that what you say and what you think might differ.	The group might not reach consensus; if this happens then allow two bubbles/statements.	Collect and type up afterwards.
THINKING See Example 2	Participants record what they'd say and what they're really thinking.	Participants find it fun to complete.  Is a 'safe' way of expressing what	Only captures the conclusion not the process of reaching them.	See page 11 for examples of images that can be used for this task.
	Can be done individually or as a group.	participants felt about an event, rather than simply asking for an oral response. Can be anonymous.	Can't get respondent to explain meaning if unclear.	
QUESTIONNAIRES	Paper based or online (ie: LimeSurvey or SurveyMonkey platforms.)	Allows for mass collection of data where trends and correlations can be identified.	Participants may not enjoy completing them. Low response rate if asked to complete	Online- no data entry by researcher. Analysis can be conducted using standard
	Conducted at the time or after an		afterwards.	statistical analysis. Thematic

Tool	Comments/how to use	Advantages	Disadvantages	Recording
	intervention.	Statistical analysis can be reported.		analysis can be used for open
			If they are closed then they don't	responses
	Can be closed (eg multiple choice or	If open-ended questions are used	capture opinion if they are open	
	Likert Scale responses) or open, or a mix	citations can be generated to use in	they take a long time to	Paper-based- need to enter
	of both.	reports.	complete.	the data into a spreadsheet
				which can be time
	Care should be taken in the preparing of		If completing during an event can	consuming and error-prone.
	questions – think about purpose.		end the event on a low point.	
	One-to-one conversations with	Rich and deep expressions of	Time consuming to arrange,	Audio-record the
INTERVIEWS	participants.	opinion.	conduct and analyse.	conversation, transcribe and
INTERVIEWS				analyse afterwards.
	It is also possible to do group interviews	Hear the participants own words	Participants may be reluctant to	
	but these are less useful.	which can be convincing when	express their opinion if you've	
		cited in a report.	run the event. May not have an	
	Interviews can be structured, semi-		opinion they feel able to share.	
	structured or unstructured. Structured	Can be done over the phone after		
	interviews limit response but allow for	an event, or recording during an	Representativeness of the	
	easy comparison between participants.	activity/event.	opinion.	
	Care should be taken in the preparing of	Can be made part of the	Consent.	
	questions – think about purpose.	activity/event.		
			Interviewing is a skill and takes	
			time to develop.	
	Small groups of participants who are	<u> </u>	Difficult and time consuming to	Use an audio-recorder,
FOCUS GROUPS	brought together to explore an issue.	justification.	organise, run and analyse.	transcribe and analyse using
T OCOS GROOPS				standard qualitative research
	Need to facilitate the discussion without	Can be used at the beginning of	Facilitation is a skill (you can use	techniques.
	leading it.	project to get a rich understanding	some of the other activities in	
		of where people are with a concept	this list).	It can be hard to ensure that
	Focus groups are different to group	or issue which you can use to		people don't talk over each
	interviews: you are looking for	inform the development of an	Representation of opinion.	other: if they do this the
	agreement and disagreement and the	activity or reassess after the		recorder will not capture it
	thought processes behind the opinions.	intervention.	Consent.	all.

Tool	Comments/how to use	Advantages	Disadvantages	Recording
	Ask participants to write a postcard to	You can read/analyse the postcards	Cost for postage (could change to	Photocopy, transcribe and
POSTCARD HOME	themselves. You then post it back to them a week or two after the event.	before you send them home.	'email home').	analyse using standard qualitative techniques.
		They can be completed individually	Participants will know you'll read	
	You might want to keep it broad or you	so they allow a more personal	them so might write what they	
	can use it to find out what people think	reflection.	think you want to hear, or write	
	they'll do as a result of the activity		something 'funny'.	
	('send yourself a postcard reminding	They act as a reminder so might		
	you of what you said you'd do when you get back home/to the office/to school')	strengthen the effectiveness of your intervention.		
	These are one-image cartoons showing	Professionally developed and	You need to buy them (are	Collect the cartoons. Take a
CONCEPT	a situation or phenomenon. The characters are expressing different	produced cartoons which can be used in a variety of ways. They are	trademarked).	picture of the vote/ record number of responses.
CARTOONS	opinions about what they think is	tried and tested.	They have been developed only	· ·
	happening.		for Maths, English and Science.	Write up afterwards.
<u>www.conceptcartoons.c</u>		One of the answers is 'correct' so		·
<u>om</u>	Are designed to intrigue, to provoke	you can use pre- and post-	May not have a single "right	
	discussion and to stimulate thinking.	intervention to assess progress.	answer"	
	You can present the cartoons to groups	It is possible to make ones for your	Doesn't capture any	
	by printing out/displaying on a screen.	discipline/concept but this takes	discussion/dialogue before vote.	
	Participants discuss which statement	time and an illustrator.		
	they agree with - mark on the cartoon			
	or vote (see voting section). There may			
	be a blank speech box were participants			
	can add their own thoughts.  A person is dedicated to watching and	You have a separate pair of eyes to	Participants can find it off-putting	Observers sit in the
	recording the event or activity.	watch and record while you	to have an observer.	environment and record on
PARTICIPANT	recording the event of activity.	facilitate.	to have an observer.	paper. There might be table
ODCEDVATION	They might have specific things they are	racintate.	They can react to the	which they complete eg.
OBSERVATION	looking for eg. enjoyment behaviours,	The observer can be asked to look	observer/change their behavior.	number of people in an
	visitor flow, type/number of questions	for specific things or a more	Table to the second of the sec	exhibition every 30 mins or
	asked.	general overview.	Difficult to capture all the data.	number/type of questions
			,	asked.
	They can be passive –sit in the room but	They can capture data you as		

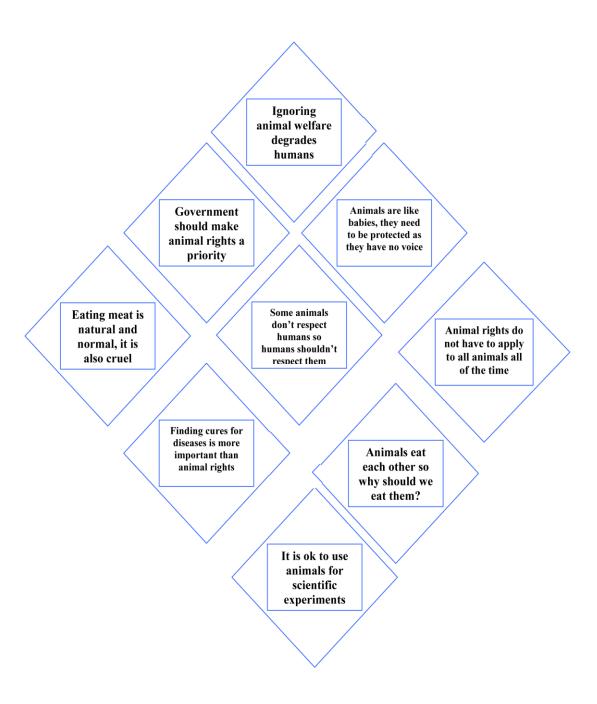
Tool	Comments/how to use	Advantages	Disadvantages	Recording
	don't interact with people, or they can	facilitator can't.		Or open field notes could be
	follow a group of people (called an	_		generated.
	accompanied visit).	They can look for behaviours and		
	Va./II assal to seed with above to	interactions.		Field notes should be shared
	You'll need to work with observer to	lk oon bo o noutisinout (somoons in		with event organiser
	ensure they know to look for and record.	It can be a participant (someone in the group you are delivering to) or		promptly eg. a short discussion.
	record.	a colleague who may or may not be		discussion.
		associated with the event		Notes can be typed up for
				further analysis.
	At the end of the session ask a small	Gives space for participants to	Assumes objectives and	Film (see film section) – can
PARTICIPANT-LED	group of participants to explain the	reflect on and explain the	outcomes were apparent.	be released as a podcast.
PARTICIPANT-LED	session objectives and intended	objectives and outcomes of the		
PLENARY	outcomes of the session/activity.	session.	May say what they think you as	Transcribe and use standard
			facilitator want to hear (consider	qualitative analysis
	Ask remaining participants to briefly discuss in groups whether they agree	Is a way for the facilitator to see if the objectives they set for the	leaving the room and getting participants to produce it without	techniques.
	with the summary given by the group.	activity have been recognised as	you there.)	
	with the summary given by the group.	well as achieved.	you there.)	
	Ask others to offer additional and	Wen as demerca.	Time needs to be given to this	
	complementary points.	Develops as other participants add	activity, it will not work if only	
		to the discussion.	lasts 2 minutes.	
		May lead to a concise summary of		
		the activity which can be		
		recorded/act as a 'podcast'.		
	There are many ways to use videos to	Multisensory representation of	Consider issues of privacy/	Transcribe and use standard
FILM	help evaluation:	activity/event. If edited a high	consent.	qualitative analysis
	<ul> <li>A video camera can be set up in the corner of the room and a</li> </ul>	quality product may result.	Time-consuming to transcribe/	techniques.
	session/activity videoed.	Can be done during or after event	edit/pick out key parts of video	Edit/ create a compilation
	<ul> <li>Interviews and focus groups</li> </ul>	(issue with equipment loan).	that are useful for evaluative	video of the activity/ event
	could be filmed (see separate		purposes.	,
	sections)	Can be uploaded to the internet		
	<ul> <li>'Diary room' – participants</li> </ul>	with ease (more people are	Equipment used to produce high	

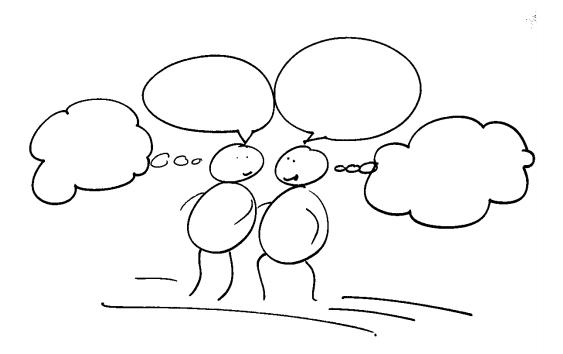
Tool	Comments/how to use	Advantages	Disadvantages	Recording
1001	record thoughts on event/activity in a private space.  • Participants use video to document ideas/activities, to record issues related to the activity/concept that they see outside of the activity- in their	developing these skills)  Different peoples' 'diary entries'/video logs can be analysed for key themes.	quality videos may be expensive.  Video footage/sound recording may be of poor quality and not do the activity justice	Recording
	environment and community.			
REFLECTIVE LOG	There are many tools for this, but it essentially relies on you looking back at the activities and critically considering them from multiple viewpoints. You can use a structured log (see Example 4) or you can simple jot down some notes and thoughts.  You can do it alone or with others.	Easy to do – requires only a little time and discipline  Is a way for the practitioner to reflect on/consider the event from their own perspective.	Offers only a single perspective. Open to bias as you may be easyor hardon yourself! When you involve others in the discussion of your practice they may mediate their viewpoint.  Needs to be completed with other activities	Record, write, photograph, video diary – whatever works for you. You might consider annotating the notes you made before the activity (eg lesson plans) so you remember what worked / what you'd change when you come to it again.
SENTENCE STARTERS See Example 3	Give incomplete sentences for the participants to complete.  The sentence starters can be written, and participants asked to respond in writing, or they can form part of a focus group discussion point or interview schedule.  Don't go beyond 5 sentence starters as the task may become onerous, and less quality responses given.	Easy to do.  All participants are asked to comment on the same thing so aids analysis.  Can focus the sentence starters on what you are evaluating/ what you are seeking data on.	Template/sentence starters need to be prepared in advance.  If using the written method it is another tool based on writing.	Copy the forms/responses for your own usual qualitative analysis.  Let participants take the original forms away with them as a reminder of the event/learning.

### **EXAMPLES**

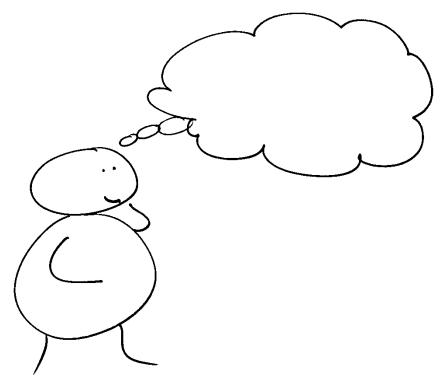
#### **EXAMPLE 1** DIAMOND 9

Participants in a group of 4 used a diamond-nine grid to sort a number of statements about the rights of animals, based on their own opinions. The nearer to the top, the more strongly they agreed with the statement. They justified the positioning of cards in a follow-up discussion.





The image above could be used after an activity/session. Ask participants 'what will you say about this session when you have left'. Then 'What will you be thinking about the session when you have left'. Questions can also include 'What have I learnt?' or 'What do I think about x?'



This image can be used to capture what the facilitator of the event may be thinking. It can be done by participants, or the facilitator themselves as a self-evaluation.

#### **EXAMPLE 3 SENTENCE STARTERS**

I liked the way the researcher
When next teaching this topic I will try
The session could have been improved by
I learnt
I liked the way the researcher
When next teaching this topic I will
try
The session could have been improved by

This sentence starter activity was developed for school teachers involved in the University of Exeter's SUPI project. It was designed to measure success of/feed into two of our impact goals – i/ impact on teachers' capacity to bring contemporary research into the classroom, and ii/ impact on ECRs' skills in communicating research to young people.

#### **EXAMPLE 4** SELF-EVALUATION: REFLECTIVE LOG

The main focus of this booklet has been on how we can access and harness participant voice in the evaluations of activities and events. However, facilitators themselves can also act as a great source of evaluation data. Many of the tools above can be used by the facilitator as a reflective practitioner, someone who seeks to improve their own practice. As part of the SUPI project, the University of Exeter team developed a reflective log for the Early Career Researchers who took part in school-based work to reflect on their practice after each engagement. We include it here with adaptations to suit anyone facilitating public engagement activities.

Each time you lead a public engagement event you could use a variety of the questions listed below to evaluate/reflect on your experiences. Do not feel that you have to answer each question, rather, reflect on some that are pertinent to you. Perhaps look at a different section after each session?

You could reflect on your THOUGHTS AND FEELINGS about the event. Or you could EVALUATE the session, using your own thoughts, but supplementing it with the views of others. Or you could try to draw up an ACTION PLAN to make your next session even better.

What?	Description
happened? did I see/	Where was I, who else was there, why was I there, what was I doing, what
do?was my reaction?did	happened?
other people do?	Provide a clear description of the teaching activity(ies) that you led. At this
	stage resist the temptation to make judgements or to try to draw conclusions:
	simply describe.
So what?	Thoughts And Feelings
How did I feel at the time?	How was I feeling at the beginning? What was I thinking about?
Do I still feel the same?	What did other people's actions make me think / feel? How did I feel about
	the outcome? What do I think about it now?
	What were your initial thoughts and feelings about the experience of teaching?
	Again don't try to analyse what went on yet.
So what?	Evaluation
What where the effects of	What was good about the experience for me, the participants, others?
what I did (or did not do)?	What was bad about the experience for me, the participants, for others?
	What went well and what could be improved?
	At this stage you start to make value judgements.
It's also useful at this stage to	o draw on evidence other than your own thoughts and feelings if possible.
What did the participants thi	nk of the session? If you were observed by a peer or mentor, what were their
views?	
So what?	Analysis
What have I noticed about	What did I do well / not so well? What did others do well? Did it go as
my practice?	expected? Why / why not?
What have others noted	What sense can you make of what happened? How does your experience
about my practice?	relate to that of others?
At this stage it is useful to dr	aw on the literature and research relating to learning and teaching. What
theory/research helps me un	derstand the experience?

	Conclusions (General)
	What can be concluded (if anything) in a general sense from your experiences
	of teaching and the analysis you have just undertaken?
Now what?	Conclusions (Specific)
What are the implications	What can be concluded about your own specific, unique and personal way of
of what I have described	teaching? What are the key things I have learned from this incident - about me,
and analysed– for me and	my performance, others and their performance? Could I have done anything
others?	differently? How might you change your future practice?
Now what?	Action plan
What information / skills	What would I do in a similar situation in the future? What aspects of my
would I need to cope with	knowledge / skills could I develop? How will I do this?
similar experiences?	What goals can I set myself for the future? What outcomes / competencies do I
What help would I need to	need to focus on now?
acquire these? What is the	
main learning from this	
experience and reflection?	
How can I modify my	
practice?	
What if I do nothing?	

(Based on Driscoll, 2000; Driscoll & Teh, 2001; Gibbs, 1988)

#### **FURTHER READING:**

BERA (2011) Ethical guidelines for educational research <a href="http://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Ethical-Guidelines-2011.pdf">http://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Ethical-Guidelines-2011.pdf</a>

BSA (2006) Statement of ethical practice for the British Sociological Association – Visual Sociology group <a href="http://www.visualsociology.org.uk/BSA">http://www.visualsociology.org.uk/BSA</a> VS ethical statement.pdf

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http://www.canterbury.ac.uk/centres/red/ethics-governance/REG ADV NOTE 1.pdf

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http://www.esrc.ac.uk/funding-and-guidance/impact-toolkit/developing-plan/measuring-success/index.aspx

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#### **AUTHOR BIOGRAPHIES**

#### Helen Featherstone, PhD

Helen has extensive experience of evaluating public engagement activities, preferring a mixed methods approach to evaluation. Her research and practice interests lie in the people involved in public engagement with research: the public participants, the researchers, the partner organisations... For three years (2009-20012) Helen was Chair of the Visitor Studies Group which promotes and supports an audience-centred approach to cultural activities in museums, galleries and other visitor attractions. See visitors.org.uk for more information. Helen is keen to share experiences of evaluation and regularly delivers workshops for public engagement practitioners.

Helen is currently Head of Public Engagement at the University of Bath. Prior to this she held a similar role at the University of Exeter. In these roles she supports and enables researchers to involve the public with their research.

#### Alison Black, PhD

Alison is project manager of the University of Exeter's SUPI project which aims to communicate university level research to enhance the school curriculum and to raise aspirations of young people from diverse backgrounds, as well as to facilitate the career development of Early Career Researchers. This project involves input from subject experts, education experts, schools and ECRs. Alison helps manage and facilitate the project, and is responsible for developing its evaluation strategy.

Alison worked as a teacher in primary and secondary schools prior to commencing her post-graduate studies, and works as a lecturer and a research associate at the University of Exeter and Plymouth University. A range of her research projects have involved creative evaluations and innovative ways of accessing participant voice.