Beginner's Guide to Evaluation

Trainer Handbook

An introduction to the Beginner's Guide to Evaluation course

The NCCPE and the Beacons for Public Engagement were commissioned by the National HE STEM Programme to support HE STEM practitioners in developing their evaluation skills. A survey was launched to inform this development and based on the feedback this practical workshop has been created aimed at HEI staff and students who have experience of undertaking HE STEM outreach activities.

This work book is for trainers of the course, and is intended to provide useful background and context to help you prepare for leading the course.

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Beginner's Guide to Evaluation: Aims and Objectives

Aims

To inspire and support participants to
- Evaluate their outreach projects and activities
- Develop an evaluation plan for a HE STEM activity

Objectives

Participants will have the opportunity to
- Develop and benefit from a deeper understanding of why evaluation is important and how to do it
- Share their experiences and learn from the experiences of other participants.

LEARNING OBJECTIVES

As a result of taking part, participants will develop:
- An understanding of the value and importance of evaluating HE STEM outreach
- An understanding of the process of successful evaluation and collecting evidence of impact
- Increased awareness of the issues and challenges of evaluating HE STEM outreach
- An increased confidence in developing an evaluation plan and using new, alternative approaches to evaluating public engagement
- Understanding on the uses of evaluation including improving activities; sharing good practice and reporting
- Personal and professional skills, for example communication, planning and critical reflection
- Experience of developing an evaluation plan and using new, alternative approaches to evaluating public engagement
- Understanding on the uses of evaluation including improving activities; sharing good practice and reporting
- Increased confidence in use of evaluation

Who is the course for?
This course is aimed at anyone who is or will be evaluating their public engagement work and in particular people who have little experience of evaluation, and would like to develop their understanding and skills.

Please note: The course was developed with an HE STEM outreach focus – however it can be used for all subject areas with the selection of different case studies for the course.

Promoting the course
This text is designed to help you promote and advertise the course to potential participants:

Always wondered whether the HE Stem outreach activities you are doing have any value? Want to improve your practice but don't know where to start? Fed up of feedback questionnaires but want to develop an evaluation plan that works for you? Look no further.
The National HE Stem programme funded the NCCPE and the Beacons for Public Engagement to develop an exciting new course: Getting Started: A Beginner's Guide to Evaluation.
(Context specific content)
This one day course will encourage you to think about why evaluation is important and what it can tell you. The day will cover important questions including:

- Why evaluate your STEM activity?
- How do you get started?
- How to engage your audiences in evaluation
- Creative ways to evaluate
- Where can you get help and support for your evaluation

This highly interactive course, with exercises and discussion, will enable you to develop a draft evaluation plan for your activity, and find out how to put it into practice.

Top Tips

This is a highly interactive course. The course has been piloted successfully – and the feedback has been excellent. All of the activities have been tested out – and we are confident that they provide a great opportunity for participants to reflect on the content.
(We will be posting up the final evaluation from the pilot on the Trainers Ning site.)

Here are our top tips..

- Keep the pace up. It is very easy to get bogged down with detail in this course – but there is a lot to cover.
- Consider using the participant workbook. This is a really useful way for people to capture their reflections as they work through the course – though not everyone will want to use it, some people find it invaluable.
- Encourage participants to bring an example of a project they would like to develop an evaluation plan for.
- Don't be afraid to not know the answer to everything – make use of the expertise in the room, and draw on other people's experiences and viewpoints.
- Make sure you know what other resources are on offer to participants interested in developing their work in this area. We have listed resources we know about in the participant workbook – however it would be good to add relevant local sources of support.

As more trainers run the course we will add to this top tips section. Please let us know if you have any suggestions.

OTHER SUPPORT AVAILABLE

Ning website

Participants in the 'Training the trainer' course have access to an online 'Ning' site – where you can download the course materials including: Beginner's Guide to Evaluation presentation; Beginner's Guide to Evaluation participants' workbook and hand-outs. In addition you will be able to ask questions about the course. We also plan to host an online event for trainers to address any questions arising from the material. We will advertise this through the Ning site.

Trainers

We also have trainers available who could join you when you run the course for the first time – should you so wish. Please get in touch with lisa.adlington@uwe.ac.uk if this would help you.

Running the course: timetable

9.30-10.00	**Registration and Coffee**
10.00-11.00	Introduction to the programme - Why evaluate your outreach activities? - What are you aiming to do? - Evaluation plan - Writing aims and SMART objectives
11.00-11.20	**Break**
11.20-12.20	- What question do you want to ask? - Devising your methodology
12.30-13.15	**Lunch**
13.15-14.15	- Collecting your data
14.15-14.25	**Break**
14.25-15.30	- Analysing your data - Making use of your evaluation
15.30-16.00	**Plenary**
16.00	**End**

Running the course: What do you need?

Pre course preparation

Course participants will be asked to answer three questions on booking their place. This will help provide a baseline for use in the workshop itself.

- What do you hope to get out of this workshop?
- On a scale of 1-5 where 1 is not very confident and 5 is very confident - how confident do you feel to evaluate your current activities?
- On a scale of 1-5 where 1 is no experience and 5 is very experienced – how experienced are you in evaluation?

These will be repeated at the end of the workshop. This will help you to:

- Ensure the workshop meets the needs of participants
- Provide an example of taking a baseline
- Provide an example of collecting data in order to inform development of activity (in this case the training course provided)

Before the event

- Advertise course
- Tailor PowerPoint / participant workbook to institution (including baseline data)
- Prepare and print activity resources and signage
- Print workbooks
- Book refreshments

Room set up

- Cabaret style
- Projector, screen and audio
- Flip charts
- Post its and pens
- Coffees/ teas/ lunch!

Resources for running the course

Course PowerPoint

Participant handbook: Personalised to your institutional context if necessary.(One per participant and trainer)

Resources for activities:

- Case study hand-outs for developing our evaluation plan exercise (slide 10): *These are for use by people who do not bring an example to work on. During the pilots we always had enough examples brought by participants, and groups tended to choose one of these to work on.*
- Corrosion Summer Ball event handouts for output, outcome and impact activity (see slide 13) (two per group) Public and event cards for data collection techniques exercise (see slide 27) (One example per group of 3 people.)
- Visitor comment cards for GLO coding exercise (see slide 34) (One set of comments, and coding framework per group.)
- Evaluation plan: 1 per participant (these are included in the participant workbook. We found it helpful to have A3 versions for the group work.)
- Question framework: 1 per participant (again included in the participant workbook)

Feedback cards: To be handed out at the end of the course. (One per participant)

Signage:

Group A and Group B: for the wall of success exercise

Wall of tears; Wall of confusion; Wall of happiness: for collecting participant feedback throughout the course

Baseline question: On a scale of 1-5 where 1 is not very confident and 5 is very confident - how confident do you feel to evaluate your current activities? This sign to be on a flipchart with 1 – 5 scale. People will add their name on a post it to this sign

Running the course: Content

These notes include narrative and activity descriptions to help you prepare the course. It provides quite a lot of detail of the course content, and resources you can use to explore these areas further. We hope that it is helpful in developing a course for your participants.

10am: Course introduction

Slides 1 – 3 (15 mins in total)

Slide 1:

Trainers should welcome people to the course and do quick introductions.

- Introduce presenters
- Course developed by the Beacons for Public Engagement / NCCPE and funded by HE STEM
- Introduce icebreaker activity

Slide 2: Wall of Success: Icebreaker activity

Activity: An opportunity for people to get to know one another by sharing an activity that they think has been successful.
Step 1: Split the room into two equal groups A and B. Everyone posts up a short post-it with their name and the name of a project they have been involved in (as an organiser or participant) that they think was successful. Group A's post-its go on board A and group B's on board B.
Step 2: Group A each pick a post-it from board B and find the person who posted it up there. They then discuss what the event was, and what made it successful. How did they know the project was a success? Gather key phrases onto post-its and add these to the board.
Step 3: After 5 minutes, people are asked to move onto the next conversation. The exercise is repeated, with group B selecting from board A.
Step 4: After 5 minutes, share feedback on some of the common phrases.

Slide 3: Introduction and housekeeping

Presentation

- **Introduce the participant work book**: Advise people to use as they wish during the course. Please note some of the course content is included so encourage people not to look ahead!
- **Ning site**: Following the course we will send out an electronic evaluation form. If you complete it you will be given access to a Ning site. This online space will include all the handouts; presentation; and also an opportunity to ask questions and discuss your evaluation planning. We will have trainers and other evaluation experts involved in this site – who will be able to help address specific questions as they arise.
- **Informal:** Encourage people to ask questions/ come in and out as they please etc
- **Housekeeping** (Toilets; Refreshments; Fire drill)

10.15am: Why evaluate and what are you aiming to do?

Slides 4 – 10 (45 mins in total)

Slide 4: Course Outline

Presentation

- Content of the course
- Won't be enough time to cover everything in detail – but hopefully the course will encourage participants to develop their evaluation plan.

Slide 5: Why evaluate?

[The images on this slide are from the Wriggly Rangoli project, Manchester Science Festival. The project was collaboration between Manchester Development Education Project, UoM researchers and Inspired Sisters (a group of Asian women and their children from Longsight) to raise awareness of parasitic infections and global poverty. The project inspired designs which were translated into large-scale public art (Rangoli) in Longsight and Manchester Museum.]

Slide 6: Activity: Reasons not to evaluate

Plenary activity: Gather ideas from participants about why people don't evaluate. Gather these onto a flipchart – which can then be displayed on the wall.

This helps to pick up some of the attitudes of people in the group to evaluation and also helps to recognise some of the limitations we have in doing evaluation.

Use this to lead into a discussion about why evaluation is important – and how this course might tackle some of the reasons we don't evaluate. ***(Why evaluate is included in the participants workbook.)***

Benefits of evaluation include	
Helps with funding applications Focus on how you will know if you have been successful Provides evidence of impact Demonstrates value for money	Aids planning Encourages reflection and continuous learning Creates a record of what has been achieved Identifies areas of improvement If shared, can inform practice of others

Slide 7: What are you aiming to do?

Presentation:

- Introduce the evaluation plan
- Evaluation is part of the overall project plan
- Need to think about evaluation at the start and develop your evaluation plan alongside your event/activity plan.
- This will help you plan your project, as thinking about aims and objectives is clearly part of developing your project plan anyway
- Does not have be long e.g. 1-2 sides of A4
- Helps keep you focused and clear – what you want to know; how you will collect the data; what data you need to collect; etc.

Evaluation plan template and sample in participant workbook

Slide 8: What goes in an evaluation plan?

Presentation:

1. Aim (what do you want to achieve? Big picture!)
2. Objectives (what you need to do to achieve your aim?)
3. Evaluation questions (what do you want to know?)
4. Methodology (what strategy will you use?)
5. Data collection (what techniques will you use to collect your evidence?)
6. Data analysis (how will you analyse your data?)
7. Reporting (who will be reading your report?)

Talk through the slide and point out there is an evaluation plan in the workbook and also on the Ning site.

Slide 9: Aims and objectives

Presentation:

- Clarify what the aim of an activity is. What is the overall purpose?
- As participants how they would describe objectives. (e.g. the things you need to do to achieve your aim)
- Introduce SMART objectives: what does each letter mean? How does this help inform your evaluation planning?

Slide 10: Activity: Starting your evaluation plan

Group activity:

Set up: Some participants will have brought projects that they want to develop an evaluation plan for – but if there are people that haven't, hand out the case study examples. These case studies are all based around outreach activity and provide a real example to work with. (Please note – people might want to work on only one or two plans in each group – in which case you may not need additional case studies).

Provide templates of the evaluation plan for people to record their work. **(This plan is also in their participant handbook. Some groups prefer to have a separate copy to work on, and many preferred having an A3 version to work on together.)**

Activity: Ask participants to work in groups of 2 or more to write their own aim and SMART objectives for their activity/event. Some of the participants will already have written these – so they can focus their time on testing whether their objectives are SMART, and amending them if they are not.
Feedback: Ask if anyone willing to share what done.
Manage feedback – depending on how confident people are to evaluate their activity – important to be sensitive with the feedback and try to build on what people have done! Can remind people to look back and try to ensure their objectives are SMART

Slide 11
Coffee break

11.20am Methodology
Slides 12-25 (60 min)

Slide 12: What questions do you want to ask?
In this section of the course we will re-cap what evaluation questions are - What do you want to know? Before we look at this is helps to think about the difference between outputs, outcomes and impact.

Slide 13: Activity: Outputs, Outcomes and Impact
Plenary discussion: Ask participants to define outputs; outcomes and impact and discuss. Agree definitions and examples.

Outputs = results of your activity; usually easiest to measure Outcomes = overall benefits of activity (an outcome is really an immediate impact); relatively easy to measure if you plan it into the evaluation Impact = overall effect or influence – the sum of the outputs and outcomes; the lasting effect or influence; much harder to measure as often require longer time frame than that offered and as time goes on impacts are less east to attribute to specific activities.

Group activity: Introduce the Corrosion Summer Ball. Ask groups to work together to identify what might be the outputs, outcomes and impact of the Corrosion Summer Ball event. **(This case study is provided as a handout.)**
Possible answers could include:
Outputs = Number of people who took part. Type of people who took part e.g. families. How the activity could be improved. Are there any unexpected outputs?
Outcomes = Public knowledge of corrosion improved. People developed a better understanding of how corrosion affects their everyday lives. People enjoyed the experience. Young people were exposed to area of science - corrosion. Students enthused about their research. Any unexpected outcomes?
Impact = PhD students involved developed engaged practice in their research. People get involved in further university based activity. Young people study science at university. Any unexpected impacts?

Slide 14: Evaluation Questions
Presentation:
- Evaluation questions are the questions you want to answer as part of your evaluation.
- They may look at how you have delivered against your aims and objectives.
- They will usually include questions relating to outputs; outcomes and impacts.
- We would advise having no more than 6 evaluation questions.

Group activity: Write up to 3 evaluation questions for your activity or event.

Slide 15: Devising a methodology
Presentation:
- How will you get your data? Lots of things you need to think about but here are two useful things to consider:

1. Creating a baseline

Important to create a baseline from which you can measure and evidence any change. How will you know if people's knowledge or attitudes have changed? Where are you starting from? (will discuss this later...)

2. Getting different perspectives.
There are lots of people who can contribute to your evaluation – not just the participants.

Slide 16: Creating a baseline

Presentation:
Ask participants 'What's a baseline?' Baseline is a measure of how things are before an activity starts.
Why is a baseline important? To enable us to see any change as a result from our activity
Sometimes we think of evaluation as something we do in addition to the activity – however if we can embed it in the activity you are less likely to get evaluation fatigue.
When people booked to come on this course we asked they were asked three questions:

- How confident you are to evaluate your activity?
- How experienced you are in evaluation?
- What you hope to get out of the event?

The results of these questions helped us to shape the activity to meet the needs of the participants. *(Please note – only include this if you have used the data to inform your approach!)*

Slide 17 & 18: Data

Presentation: These slides can be updated with the data you collected on the booking form. If you are unable to collect this data you can still use this activity. (To do this – you provide the questions on a flipchart and ask people to post a post-it to indicate their response.)

Slide 19: Triangulation

Presentation: Introduce the idea of triangulation – the idea that you can get a variety of inputs to inform your evaluation – including your own.
Triangulation can add some rigour to your evaluation.
Explain that when deciding on the method to use to evaluate your activity, you need to use a mixture of techniques and <u>triangulate</u> if possible i.e. get more than more perspective for example from the public (*the participants*), your own (*the deliverer*) and a neutral observer (*the evaluator*).
Recognise the limitations on each of these – e.g. the deliverer may not be objective!

Slide 20: Evaluation planning framework

Presentation: Introduce the idea of the planning grid – which serves as a planning aid, and reminds you of the importance of triangulation!
This framework requires some explanation. The idea is to think about who might be able to contribute data to answer your evaluation questions. So you write the evaluation questions on the left hand side – aligned with the resources/ activities etc. Then you can consider who you might get data from, and how you might get this data.

Slide 21: Types of data

Presentation: The data you collect depends on the purpose of your evaluation.
Remember that there is no point in collecting data if you do not have a plan for how it will be used. Lots of time is wasted by collecting data that you don't have time to synthesis or that is not relevant to the evaluation questions you want answered.
There are two types of data 'quantitative' and 'qualitative'
Often it can be helpful to use a mixture of the two types of data.
Plenary discussion:
Discuss differences between quantitative (use facts and figures and multiple choice questions) and qualitative (ask people what they thought with open-ended questions) techniques.
Discuss the value of each type of data and explore how to ensure that you get a balance

Slide 22 & 23: Quote

These slides show an example of why it's really essential to emphasise the importance of balance in your reporting. If the quote is not representative – then you should not use it illustratively.

Slide 24: Activity

Group Activity: Ask participants to transfer their evaluation questions to the first column of the evaluation grid – see filled in example in participant workbook.
Illustrate with worked up example.

Slide 25: Lunch

Encourage participants to reflect on their experiences so far. Invite them to post up comments on the happy, sad and confused boards.
Make sure you take the time to read these comments over lunch – and reflect on if and how you might tackle them during the afternoon.

1.15pm Collecting and analysing your data

Slides 26-31 (60 mins)

Slide 26: How will you collect the data

Presentation: There are several examples of different ways to collect data on this slide:

- Wriggling rangoli – collect comments on a worm
- Target
- Tick boxes
- Focus groups

Slide 27: Activity: Data collection techniques

Activity: Provide each group with a card detailing a public engagement activity and audience, and ask which data collection techniques might be suitable and why.

- Key Stage 2 children (aged 7-11 years) attending an interactive science show
- Adults attending a public lecture
- Audience at a Cafe Scientifique event
- Table top interactive event at a science festival aimed at families
- Talk given to a rural WI group
- Outreach activities with 16-18 years olds from a local youth centre
- Science busking in Norwich city centre

Gather feedback onto flipchart – capturing the techniques chosen and the reasons you chose them on two halves of the paper.
Ask if there are other data collection techniques that people might use.
What conclusions can we draw about what you must think about when selecting types of data collection?
Think about:

- Audience
- Location
- Time
- Space
- Who collects the data
- Do you need the data
- Do you have time to interpret and analyse the information?

Refer to pros and cons of different data collection methods in participant's workbook (credit to MLA)

Slide 28: Sampling

Presentation: You do not have to evaluate everyone and every activity – just a representative sample. A large sample takes longer to analyse and is often not likely to give you any more information. Quantitative data usually involves larger sample sizes (e.g. 40-60) and you should ask at least 100 people before expressing results as percentages. Qualitative data involves smaller sample sizes (e.g. 10-20) but is in more depth.
How can you make sure your sample is representative? Various techniques – eg choose every 10th person who comes into an event; ask people to rate the event from 1 – 5 (where 1 is dreadful and 5 is wonderful) and select 2 people from each group etc etc. (More information in the RCUK handbook.)

Slide 29: Evaluation Planning Framework

Activity: Which data collection techniques will you use to evaluate your activity? How will you ensure you get a rounded picture using triangulation? Spend some time filling in the evaluation planning framework in your groups.

Slide 30: Ethical issues

Plenary discussion: Discuss what ethical issues you need to think about when conducting evaluation. Key to think about where the data goes in the end – what will happen to it? Who 'owns' the data?
Brainstorm with group likely things to include – come up with list – include:

- Be professional and treat participants with respect
- Inform people that evaluation is taking place
- Inform participants about purpose of research
- Ask permission to record
- Be honest about constraints influencing decisions
- Keep names and contact details confidential
- Consider data protection
- Use a range of methods
- Use open-ended methods
- Do not leap to conclusions without evidence.

Slide 31: Coffee break

2.25pm Analysing data

Slides 32-34 (35 mins)

Slide 32: How will you analyse your data?

Plenary discussion: Ask participants to share ideas about how they will analyse, interpret and reflect the evidence collected. Comments might include:

- Allow plenty of time
- Refer back to your evaluation questions - what were you trying to find out?
- Look for patterns and trends and themes
- Find representative quotes
- Look for contradictory data
- Be critical of your interpretation of data
- Ideally discuss data with colleagues.

Qualitative information - group it into categories, for example positive and negative comments. You can create your own tables or use a simple spreadsheet. It can be helpful to make a copy of the evidence and use a highlighter pen to mark key points or useful quotes.

Quantitative data can be analysed using database software such as Excel. When presenting quantitative data include details of how many people were asked and how many responded. You may choose to present responses as percentages.

Slide 33: Generic Learning Outcomes

Presentation: Use of coding and frameworks. Coding is a method by which you can quantify qualitative data. You can code any questions where respondents have entered their own answers. Can be simple or complex!
Coding frameworks are often used for reporting.
For example: Generic Learning Outcomes (museums); SROI (Social Return on Investment) model. Most software packages that are used for surveys allow you to code qualitative data – and you can develop the code as you go along – as long as you go through the data again once you have all your codes decided.

Slide 34: Activity: Coding

Activity: Ask participants to code examples of visitor comments from museums, libraries and archives using GLOs. Look at and discuss in more detail.
Some of the challenges with coding: If group do it – they may use the codes differently – therefore need to check consistency across group of coders

3.00pm: Making the most of your evaluation

Slides 35-39 (30 mins)

Slide 35: Making the most of your evaluation

Presentation: In this section of the course, we're asking participants, 'What do you need to think about when writing your report?' In final report it is important to consider strengths and weaknesses and lessons learned for the future. There is no point collecting data unless you are going to make use of it and share it with colleagues/stakeholders. Producing a written report of the evaluation process can be very useful – even if it is a short summary.
Plenary discussion: Ask participants to suggest things you need to think about when creating a report

1. Audience – who will be reading your report? How might the needs of different audiences effect what you report?
2. Structure - should be structured around the evaluation questions/objectives your evaluation set out to address and include:
    - The context of the evaluation
    - Aim, objectives and evaluation questions
    - Description of activity/event
    - Methodology
    - Summary of evidence (data itself may form appendix)
    - Overview of the activity/event
    - Conclusions and recommendations
3. Layout – standard report including an exec summary; case study approach
4. Critical Reflection - reflect on what you have learned from the experience. What changes will you make next time?
5. Public - if possible remember to feedback findings to those involved, value their contribution and thank them.
6. Next steps - make sure the findings are acted upon.

Slide 36: image

Concluding session

Slide 37-39 (30 minutes)

Slide 37: Concluding thoughts

Plenary recap: Recap and Q&A
Check the happy, sad, confused board and address any outstanding issues
Further comments etc
Ask people to fill in feedback card – and also ask them to post a post it on the 'how confident do you feel' when they leave – talk about the fact that it is important to get under the skin of the answer given – as you may feel less confident because you now know what you need to worry about rather than because the course was not effective

Slide 38: Useful links

Share useful links, and invitation to get involved through the Ning site.
Thank you for attending

Slide 39: Closing slide