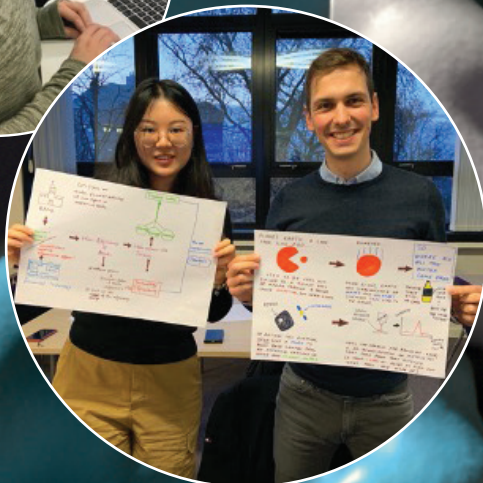


Research development workshops



Biography

Dr. Mhairi Towler



"The workshop was very helpful. I learnt a lot of do's and don'ts for poster presentations. Very interactive and interesting."

"I liked the session on storyboarding as I would like to make some animations and it was good to learn about the process involved."

Dr. Mhairi Towler integrates a background in science with animation skills in order to use visual and 2D and 3D methodologies to communicate science to a wide audience.

Mhairi gained a degree in Biochemistry and a PhD in Molecular and Cell Biology from the University of Dundee. She then carried out postdoctoral work, both in San Francisco and Dundee, in varying fields such as cell biology and human physiology. She was a founder member and Co-chair of the College of Life Sciences Postdoctoral Association. During her time as a postdoc she also completed a postgraduate certificate in teaching and learning in higher education and while studying for this recognised the importance of the visual as a cognitive tool.

While working as a scientist she became involved in several Sci-Art projects and collaborating with artists gave her an insight into the art world that inspired her and influenced her career aspirations with the ultimate goal of becoming a scientific visualisation practitioner. She completed a Masters in Animation and Visualisation at Duncan of Jordanstone College of Art and Design at the University of Dundee in 2012 in order to pursue this goal. She has exhibited her artwork in Dundee, Vilnius, Amsterdam, Barcelona, Paris, Aberdeen, Edinburgh and Edmonton.

Mhairi is Founder and CEO of the multi-award winning animation production company, Vivomotion (www.vivomotion.co.uk). The company offers a service of bespoke animations for scientific communication. In addition, training workshops are offered for postgraduate and research staff on visual communication of research. Mhairi is an Alumni of The Royal Society of Edinburgh's Young Academy Scotland.

Dr. Towler has delivered these workshops at the universities of Dundee, Strathclyde, St Andrews, Aberdeen, Glasgow, Stirling, Exeter, Lancaster, Newcastle, Helsinki, Humboldt (Berlin) and Vitae, Edinburgh, Glasgow School of Art and the prestigious Curie Insititut in Paris, France.

Introduction to Communicating Research Visually (Delivered F2F or Online)

Dr. Mhairi Towler

"This workshop improved my creative animation skills. I went from mediocre to Monet."

"Mhairi's workshop inspired even the least creative mind to develop attention grabbing and clear graphics and helped develop skills applicable to all forms of presentation."

"Very knowledgeable tutor who put the information across really well, paced just right. Really helpful to think about how to present your work to different audiences. Broadened my thinking about presenting my work. Excellent and enjoyed the creative processes. Learnt loads! Great mix of science and art..."

"Mhairi was able to make me mix poetry with my research and triggered the animator in me."

"These workshops have provided an opportunity for me to think about ways of presenting my research in ways that I had not previously considered. I have thoroughly enjoyed them."

"More interactive than expected and definitely a creativity boost!"



Various aspects of research require visuals to aid communication. The workshops/seminars described below cover all aspects of visual presentation of research. Our training aligns with the National Researcher Development Framework developed by Vitae (www.vitae.ac.uk), helping to develop skills that will be invaluable for researchers as they move through their career. Workshops can be delivered **face-to-face**, by **webinar**, or a licence can be purchased for a recorded **suite of seminars**.

The following topics are covered;

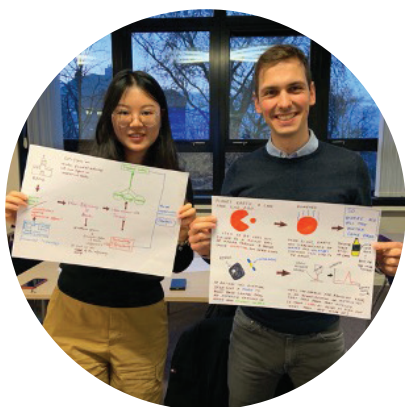
- Poster Design
- Overview Figures and Graphical Abstracts
- Visuals and Props for Public Engagement Events
- Animation Production for Social Media
- Data Visualisation and Information Design

Practical exercises are interspersed throughout for interactive learning, a free handout summarising each topic, case studies to illustrate each topic, a quiz, and a certificate at the end to show you have completed the suite of workshops/seminars.

Please enquire for further information - mhairi@vivomotion.co.uk
www.vivomotion.co.uk

Takeaways

- Handouts summarising each topic.
- A certificate for completing the suite of workshops.
- New skills and knowledge of online tools to develop your own visuals for research dissemination.



Poster Design

Dr. Mhairi Towler

The Challenge

At some point in your postgraduate career you will be expected to produce a poster presentation, whether for an International academic conference, a public engagement event or for an internal poster session. Presenting research in this format can be a new concept for some researchers involving skills not previously known.

Due to the pandemic posters can now be presented virtually. This presents a new design challenge for researchers.



The Solution

By the end of this workshop/seminar you will be able to:

- Define the principles around poster design.
- Produce a draft plan for your poster.
- Critique any previous posters you've made for improvement.
- Consider options for online presentation of posters.

Summary

This workshop/seminar introduces researchers to the fundamentals of communicating research via visual means. Participants will leave with a foundation in what aspects should be considered when preparing their research findings for visual presentation. This workshop/seminar is designed for individuals who wish to understand how good, basic design can enhance the quality of their poster presentations either for in person presentation or virtual.

Topics covered include:

- Poster Critiques
- Poster planning
- Graphic Design Principles
- Software to use
- Formats to consider for context of poster presentation



"I attended an online training course on scientific poster design organised by the University of St Andrews and led by Dr. Mhairi Towler. Mhairi was great at summarising key design principles and illustrating them with a large range of visual materials and provided invaluable post-session feedback on one of my own posters."

Alex South
PhD Candidate, Royal Conservatoire of Scotland & University of St Andrews

Research Development Framework (RDF)

- A1/A2/A3 Knowledge and intellectual abilities
- B3 Personal effectiveness
- D2/D3 Engagement, influence and impact

Overview Figures & Graphical Abstracts

Dr. Mhairi Towler

The Challenge

Many academic journals now require the submission of a graphical abstract along with submission of a manuscript.

The Solution

By the end of this workshop/seminar you will:

- Have explored software options to help with figure design/graphics.
- Have looked at design principles involved in laying out a figure.



“It was good to learn how to make a graphical introduction for my project.”



Summary

This workshop will look at how to go about designing a graphical abstract or overview figure on your research findings.

Topics covered include:

- Layout;
- Use of colour;
- What imagery to include;
- Graphical abstracts;
- Overview figures.

Research Development Framework (RDF)

- A1/A2/A3 Knowledge and intellectual abilities
- B3 Personal effectiveness
- D2/D3 Engagement, influence and impact

Visuals and Props for Public Engagement Events

Dr. Mhairi Towler

The Challenge

As an academic you will be expected to take part in public engagement events to help disseminate your research to the wider public. This can be a daunting prospect...

The Solution

By the end of this workshop/seminar you will have:

- Explored a number of creativity techniques to come up with new ideas for props and visuals that you might use for public engagement.
- Produced a mind-map detailing the new ideas.



Summary

In this workshop/seminar you will use creativity techniques to explore innovative ways to explain your research area to a lay audience. Selecting the correct visual aids for this activity can help break down communication barriers.

Topics covered include:

- Divergent/convergent thinking;
- Creativity techniques;
- Examples of good practice.

“Very informative workshop
– great ideas on how to improve
visual representation for your
research for a variety of audiences.”

Research Development Framework (RDF)

- A1/A2/A3 Knowledge and intellectual abilities
- B3 Personal effectiveness
- D2/D3 Engagement, influence and impact

Animation Production for Social Media

Dr. Mhairi Towler

The Challenge

Engaging a lay audience on social media is a new challenge faced by academics.

The Solution

By the end of the workshop you should be able to:

- Have written and recorded a script describing your research.
- Have sketched out a storyboard.
- Know how to proceed to complete production of your animation.



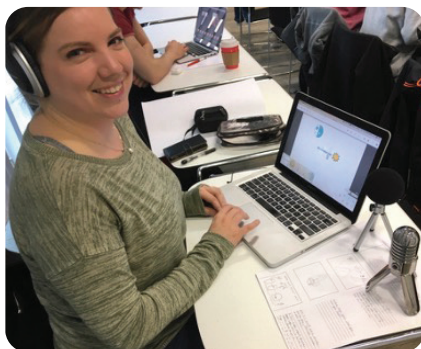
"The overview of different animation techniques and wide details of software tools available was very useful. Storyboarding was very useful too."

Summary

This workshop will teach researchers how to produce a 2 minute 2D white board animation describing their research which can then be shared on social media platforms.

Topics covered include:

- The importance of good visual storytelling
- Voiceover production
- Story boarding
- Animation production



Research Development Framework (RDF)

- A1/A2/A3 Knowledge and intellectual abilities
- B3 Personal effectiveness
- D2/D3 Engagement, influence and impact

Data visualisation and Information Design

Dr. Mhairi Towler

The Challenge

Data Visualisation is a huge field and many researchers don't know where to begin to find new ways to present their results.

The Solution

By the end of this workshop, you should be able to:

- Know the design process involved in creating a data visualisation/infographic.
- Access several on-line tools available for data visualisation.
- Design novel data visualisations/infographics for your research topic.



Summary

This workshop will serve as an introduction to the vast field of data visualisation. Highlighting on-line tools, you will learn how to tell stories with your data. Examples of unique data visualisation projects will be shown for inspiration. Designing communications that appeal on an aesthetic level is important no matter what discipline you work in.

This workshop will look at how data can be turned into compelling visual stories, including flat graphic design (infographics).

"Great session this afternoon. Now brimming with ideas for data visualisations to accompany the passenger experience."

Topics covered include:

- The importance of good visual storytelling;
- Designing and presenting graphs and charts to maximise their impact; and
- Examples of good practice.

Please note: Although different visualisation software options will be discussed during the workshop, this is not a software-training course.



Research Development Framework (RDF)

- A1/A2/A3 Knowledge and intellectual abilities
- B3 Personal effectiveness
- D2/D3 Engagement, influence and impact

Career Opportunities after a Science Degree (Online)

Dr. Mhairi Towler



The Challenge

67% of PhD students want a career in academia, but only 30% stay in academia 3 years on (Higher Education Policy Institute - 16th July 2020). It is therefore important to explore what career paths are open to you early on in your PhD journey.

The Solution

By the end of the workshop/seminar you will be able to:

- Know how to harness the power of your network for career progression.
- Have identified your values, skills and motivations.
- Have explored different sectors that you could work in.
- Have an action plan in place for your next steps.



Summary

This workshop will begin with Dr. Mhairi Towler sharing the story of her own career path, from academic science to scientific animation. Other case studies of alternative careers, as well as careers in science, will be highlighted. Participants will then evaluate where their strengths lie and how to tap into their own network for career progression. They will leave having identified a clear direction to move forward in with their chosen career.



“During the course of discussions in the career workshop, it gave me ideas to consider for my own career path, and which directions it may take in the future. Overall, I found the workshop to be both enjoyable and useful.”

Lorna Culverwell, University of Helsinki

Research Development Framework (RDF)

- B3 Personal effectiveness