



# Yorkshire Consortium for Equity in Doctoral Education

## Webinar Slides: Introduction to Research Methodologies

The following slides were used during a webinar for UGs and PGTs interested in applying for a PhD. The webinar explained different methods for conducting research at postgraduate level, and how to decide which methodology is most appropriate for your research project idea.

**Produced by:** George Gisborne (University of Leeds)  
**28th October 2024**

*YCEDE cannot guarantee that all information contained in this resource is accurate at the time of reading, particularly with regard to dates, deadlines, and funding availability.*

**Suggested Audience:** Students  
**Suggested Sub-Audience:** Prospective Applicants

*This resource is intended for use in improving equity and outcomes for ethnically minoritised individuals interested in doctoral study or careers in research. This resource was produced by the staff named above on behalf of the YCEDE project. Please ensure appropriate credits are clearly included if you use this resource.*

TO CITE THIS

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<https://ycede.ac.uk/toolkit/academic-staff-resources/pre-application/webinar-slide-pack-introduction-to-research-methodologies/>

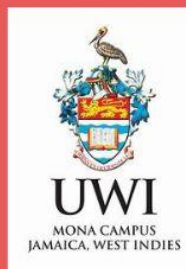
# Online Webinar

## Demystifying the PhD - Introduction to Research Methodologies

Information, advice and guidance for prospective PGRs on the different methods of research used in postgraduate research.

Featuring Dr Ricardo Anderson, from the University of the West Indies and University of Leeds visiting fellow.

For more information visit <https://ycede.ac.uk/category/events/>



Yorkshire Consortium for  
Equity in Doctoral Education



Monday  
**28**

**October 2024**

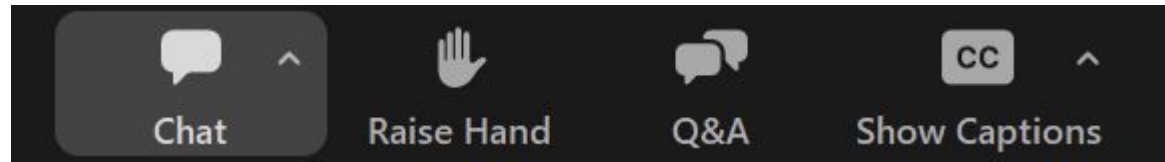
12:00pm - 1:00pm  
On Zoom



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# We want to hear from you!



- Type your questions in the chat
- Put your hand up using the **Raise** button

Baseline Survey

<https://tinyurl.com/2m926cce>



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**We want to hear from you!**



**Please note this session is being recorded**

# Who is YCEDE?



## Five Yorkshire Universities



# Demystifying the PhD – Introduction to Research Methodologies

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**2023 GLOBAL SECURITY FELLOW**  
SCHOOL OF MECHANICAL ENGINEERING  
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# What is a PhD?

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- Degree awarded based on:
  - Extensive and original research in their chosen field usually submitted in submitted a thesis or dissertation
  - Usually requires 3-5 years of full-time study
  - Alternatively, the ward can be based on a portfolio of published papers, while some countries require coursework to be submitted as well (Haidar , 2023)



# What is Research?

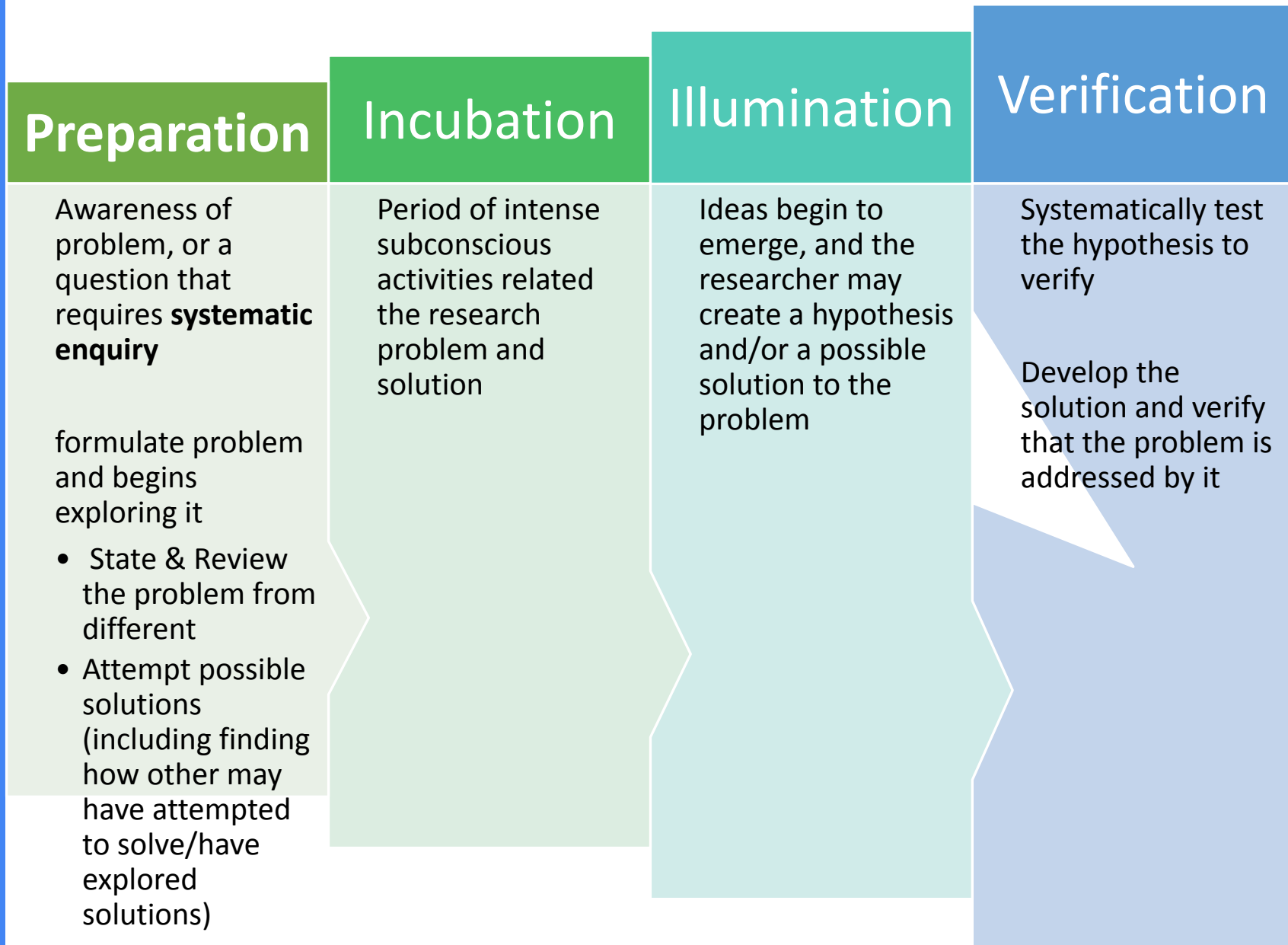
- *Careful **search** or **inquiry**, endeavor to **discover facts** by scientific study of a subject or critical investigation (Baban, 2009)*
- *Planned investigation employing recognized scientific methodology en-route for explaining, solving problems and creating new knowledge that is generally applicable (Grinnell 1993)*
- *Systematic exploration designed to advance knowledge and understanding of a subject.*
  - *Seek analyze and deduce information about people, objects and nature*
  - *Revise available information in light of new information*
  - *Interpret outcomes and communicate these interpretations*



# To obtain a PhD

- The candidate is usually engaged in 3-5 years of *Planned investigation* employing ***recognized scientific methodology*** en-route for explaining, solving problems and creating new knowledge that is generally applicable and documenting the outcomes of this in a *thesis/dissertation!*

# Research Process



# Types of Research

## FUNDAMENTAL

- To improve understanding of general issues without emphasis on immediate applications
- May not have not immediately appear to have immediate or obvious link to concrete issues or problems affecting society
- May have unexpected results, lead to new theories

## APPLIED RESEARCH

- Designed to apply findings to solving a problem (perceived or actual)
- Fundamental research may lead to findings that can be applied.

# Research Types & Examples

## FUNDAMENTAL RESEARCH

- Einstein's General Theory of Relativity ( $E=mc^2$ )
- Which parts of the human genome explains the complexity of an organism?
- The value of classical music to cultural diversification?
- Determining the computational limits of microprocessors.
- What factors contributed to the exquisite are of the renaissance?
- The influence of reggae music and Bob Marley on Africa's decolonization efforts.

## APPLIED RESEARCH

- Does the use of a particular drug lead to better health outcomes?
- Do engineers who get better pay produce more efficient vehicles?
- How does learning musical instrument impact development is dyslexic adults?
- Does the modification of plant enzyme make it produce larger quantities?
- What combination of transports types provide the most efficient movement of people in the city of London?

# Research Objectives and Methods

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# Defining Research Purpose/Objective s II

## DESCRIPTIVE

- Describes phenomena as they exist
- Identify, collect and review information on issue/problem
- Research questions may explore:
  - feelings, behaviour (of things or people), characteristics of the studied objects or subjects
  - Statistical techniques to analyze and present information/findings
  - Summarize moods, feelings, general responses/views

## EXPLORATORY

- Examine patterns or ideas that lead to a proposition that can be tested for association or causality (hypothesis).
- Testing usually requires empirical evidence (gathered from either observation or experimentation) for assessing/analysing the problem.
- Used to gain insights in subject area, prepare for more rigorous investigation
  - Case studies, observation, historical analysis

# Defining Research Purpose/Objective s II

## CORRELATIONAL

- Used to discover relationships, identify causes and effects.
- Need prior information about the problem and identify variables of interest
- Collect data (must be quantifiable), Check for relationships
- Examples:
  - Relationship between class attendance and grades (observational)
  - Divorce rates among couples who live together (Survey)
  - Violence and economics (Archival)

## EXPLANATORY (ANALYTICAL)

- Provides explanation on **how** and **why**.
- Requires use and control of variables and research activities to allow checking for effects and outcomes of changes



# Research Methods

|  |                                                                                                                                                                      |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>EXAMPLES</b></p> <p>Understanding the creative process of a reggae artist</p> <p>How does the Greco-Roman literature perceptions of the prophet?</p>           |
|  | <p><b>EXAMPLES</b></p> <p>Prevalence of hormone imbalance in people above the age of 60.</p> <p>Rate of bacteria increase in tropical fruits exposed to moisture</p> |

# Research Methods II

|                                                                                                                                               |                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                               | <ul style="list-style-type: none"><li>• The Beatles and their music, enriching the global creative space</li><li>• Chattel slavery in Barbados</li><li>• Assessment of algorithm performance on low memory single processor embedded device</li></ul> |
|                                                                                                                                               | <ul style="list-style-type: none"><li>• Experiences of the immune during Ebola outbreak in West Africa after 2015</li><li>• Men in Manilla, an exploration of trends and patterns.</li></ul>                                                          |
| <ul style="list-style-type: none"><li>◦ Fieldwork with participant observation, interviews and other collection of qualitative data</li></ul> | <ul style="list-style-type: none"><li>• Survival in methods of uncontacted peoples</li><li>• Being back in the middle east, the economics of survival</li></ul>                                                                                       |

# Research Methods III

- **CONTENT ANALYSIS**

- Study of content in various formats: text, video, audio to identify patterns, characteristics, relationships or new knowledge.

- **SURVEY**

- Sampling units of a population to be analyzed statistically.
- In human surveys, questionnaires are often used to elicit answers to specific questions

- **DISCOURSE ANALYSIS**

- Analyze the use of language (written, sign, voice, semiotic events) usually to better understand social practices, cultural issues, identity and group dynamics.

- Patterns in pop and afrobeats music videos 2015-2022

- Shakespeare and medieval literature

What is the expected outcome of the next elections and what factors may impact the outcome?

- Prose in African dialects
- Expressions of music in rituals of Christianity
- Relevance of the beatitudes and modern societal adaptations.

# Research Methods IV

- **CAUSAL MODELING / EXPERIMENTS**

- **Investigate relationships using tests controlled by the researcher**
  - Does exposure to specific levels of smoke in enclosed areas have an impact on breathing?
  - How does a computer processor perform when streaming three or more videos from remote sources?

- **LONGITUDINAL STUDIES**

- **Continuous or repeated measurement or observation of individuals or phenomena over a long period of time (usually many years)**
  - Impact of childhood values on adult relationships
  - Comparative assessment of plant growth patterns in remote uninhabited regions and densely populated cities
  - Does training a child the way they should grow results in them not departing from it when they grow old?

- **SYSTEMS DEVELOPMENT/DESIGN SCIENCE**

- Develop and artefact (software, algorithm, method/process, device)
- Describe the quality, test and demonstrate uses/effectiveness

| Identify                                                 | Preliminary Investigation                                                                                                        | Objective / Purpose                                                                                                                                                                   | Methods                                                    | Write Proposal                                                                                                                                                                                                             |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Identify an area of interest / subject you wish to study | <p>Do some investigation</p> <p>Read a few things about the subject area</p> <p>Refine idea about the focus of your interest</p> | <p>Decide on the purpose of your research:</p> <ul style="list-style-type: none"> <li>• Descriptive</li> <li>• Exploratory</li> <li>• Correlational</li> <li>• Explanatory</li> </ul> | Determine the methods you will apply to support your work! | <p>Write your proposal...</p> <ol style="list-style-type: none"> <li>1. Topic, Motivation and background</li> <li>2. Objective / Purpose of Study</li> <li>3. Research Questions</li> <li>4. Methods to be used</li> </ol> |

# Demystifying the PhD

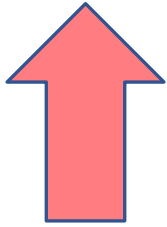
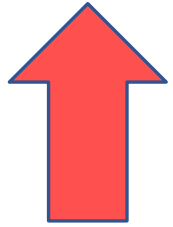
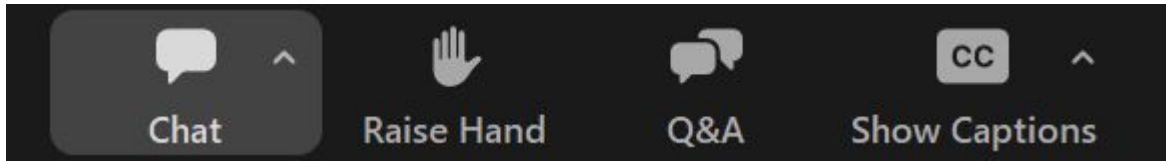
# References

1. *What is a PhD?* (2023, July 20). Top Universities.  
<https://www.topuniversities.com/blog/what-phd>
2. Social Research: Definition, Types and Common Methods (2023, March 10). Indeed Career Advice. <https://www.indeed.com/career-advice/career-development/social-research>
3. Baban, S. M. (2009). *Research: The journey from pondering to publishing*. Canoe Press.
4. Banerjee, S. (2022). *Research Methodology for Natural Sciences*, IISc Press.

# YCEDE Scholar – My methodology



# Your Questions



- Type your questions in the chat
- Put your hand up using the **Raise** button

What is the best method for my research question?

Are any methods more controversial than others?

What are the drawbacks of a particular method?

Which methods have you used in your career?

Who can guide me to choose the right methodology?



# Thank You

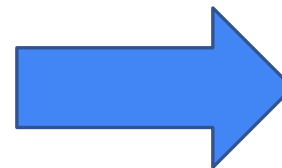
- Please give us your feedback:  
<https://forms.office.com/e/etj33zrTjZ>





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Join our mailing list using the QR Code and find out about more PhD support from YCEDE.



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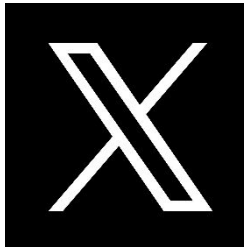
Inclusive Research Network

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<https://www.linkedin.com/groups/14054108/>



Inclusive Research Network

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# Webinar support for PhD applicants



Yorkshire Consortium for  
Equity in Doctoral Education

07/11/24 – PhD application guidance with the Advocacy Scheme

12/11/24 - Putting Passion into your research proposal

13/11/24 - Where can a PhD take you?

28/11/24 - Interviewing for your PhD: What to expect and How to prepare

30/01/25 - Literature Review and What to Expect in Year 1

05/02/25 – Preparing for a PhD: YCEDE Research Internships

30/04/25 – Managing Professional Relationships as a PGR

For more info  
and to register



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# Advocacy

<https://ycede.ac.uk/advocacy/>



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## YCEDE Advocacy Scheme

The YCEDE Advocacy Scheme is a brand new programme that puts you in touch with an academic or PhD application specialist to help:

- Increase your confidence in approaching supervisors
- Improve your knowledge of the PhD application process
- Create a unique and relevant research proposal (if required)
- Make a high quality application for a PhD



# Paid Summer Internships

<https://ycede.ac.uk/category/internships/>



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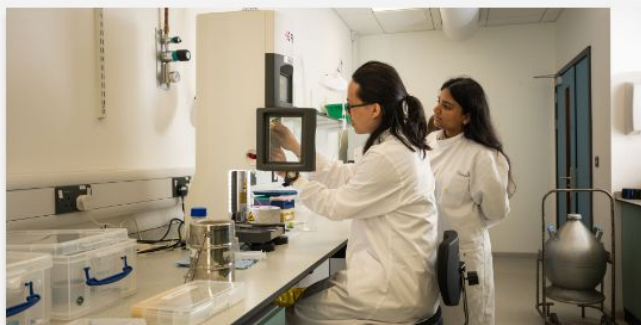
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## Research internships

YCEDE are funding 32 PAID Research Internships across the consortium of universities each year, to give prospective PhD applicants from Black, Asian and minority ethnic backgrounds additional research experience. The internships offer participants the opportunity to work as professional colleagues in partnership with academic staff, through carrying out independent research. Research interns can see whether they would like to pursue ...

[Read More](#)



## Research Internships at the University of Leeds

Educational Engagement in collaboration with Leeds Institute for Teaching Excellence (LITE) are offering up to 15 research experience placements (REPs) to be completed each academic year until 2025/2026. LITE will provide support and guidance in pedagogic research and act as a community for the successful student researchers on the programme. For examples of previous research placement projects [click here](#).  
How ...

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# Funding Opportunities

<https://ycede.ac.uk/category/phd-funding/>



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## Funded PhD: Exploring myopia and the effect of lifestyle within Bradford and West Yorkshire

About the Project Myopia, known as short-sightedness, is where distance vision becomes blurry in childhood, causing the need to wear spectacles or contact lenses at all times. The prevalence of myopia has doubled over the last 50 years, and is set to rise in the locally and globally, with 50% of the population becoming myopic by 2050. This is of ...



## Leeds University Faculty of Social Sciences Doctoral Scholarships

The Faculty of Social Sciences, University of Leeds, is inviting applications for the next round of its doctoral scholarship scheme for UK Black, Asian and ethnic minority students to undertake postgraduate/PhD research within the Faculty. Two scholarships are available each year. The Faculty of Social Sciences is committed to addressing different forms of intersecting



## 2023 WROCAH AHRC Open Competition Studentships

Looking for PhD funding in Arts & Humanities? The WROCAH competition for PhD studentships starting in October 2023 is now open! The White Rose College of the Arts & Humanities (WROCAH) is a Doctoral Training Partnership of the Universities of Leeds, Sheffield and York. The College is responsible for the distribution of AHRC-funded doctoral studentships for these universities and for ...

# Useful Links

## Postgraduate Forum

<https://www.postgraduateforum.com/forum>

## FindaPhd

<https://www.findaphd.com/>

Find  PhD

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
|  <b>? Ever considered studying a Masters or PhD?</b><br>by FAUHolly 19 hours ago | 1     | 1     |
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## Postgraduate Studentships – Open Days

<https://www.postgraduatestudentships.co.uk/open-days/>

  
**23rd NOV**  
University of Bath  
Biotechnology Master's webinar – 23 November 2023, 12:30-1:30pm GMT

  
**29th NOV**  
University of Bradford  
Postgraduate Open Day – 29 November 2023

  
**29th NOV**  
University of Sheffield  
Online Postgraduate Open Day – Wednesday 29th November 2023

  
**29th NOV**  
University of Roehampton  
PGCE Primary and Secondary Open Evening – Wednesday 29th November

# Thank you!

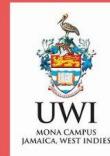
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