

Writing Research Grant Proposals

University of Strathclyde
March 15th 2011

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Acknowledgements

The design of this workshop and much of the present content was originally created by Dr Jane Wellens and Dr Rob Daley at the University of Leicester in 2006.

Structure of Session

- Welcome & introductions
- Characteristics of successful research proposals
- Stages of the application process
- Sources of funding
- Rules and guidance
- How applications are judged
- Pitfalls of writing
- Conclusions

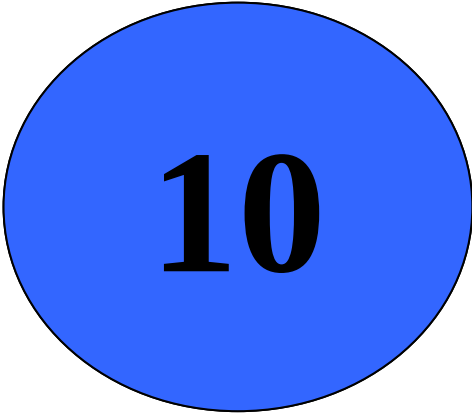
Welcome & Introductions

Please introduce yourself and tell us:

1. Your name which university you work in;
2. How your current research is funded and which funding agencies you are familiar with;
3. If you have previously written an application for research funding (whether successful or unsuccessful); and
4. What type of funding you think you will be applying for – for example fellowship, project, travel.

Characteristics of Successful Research Proposals

- Around your tables identify the characteristics of a successful research proposal.



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ESRC's Four Characteristics of Successful Research Proposals

The ESRC identify four characteristics of all successful ESRC research proposals. They:

1. promise excellent research
2. are of value to potential users outside *or* within the research community
3. convince of the ability to deliver research
4. demonstrate value for money.

Stages in the Application Process

What are the main stages in the development of a research grant application?

Pre-Award stages of a research project

Pre-award steps:

1. Proposal idea
2. Proposal development
3. Funder identification
4. Costing and pricing
5. Internal approval
6. Submission
7. Contract negotiation

Taken from <http://www.vitae.ac.uk/policy-practice/291091/Pre-award.html>

Developing your proposal

- Individually consider the following questions
 - What is your idea?
 - How feasible is it?
 - Relevant prior experience
 - Access to necessary resources
 - Who might you collaborate or work with?
 - Who do you think might fund it?
 - What will be the value of this research?
 - Who are the stakeholders and how will they benefit? (e.g. industry, policy makers, public)
 - What aspects are you least confident about?

Discuss your responses to the
previous exercise with a partner

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Sources of Funding

Main Sources of Research Funding

Funding sources researchers in African countries

- Wellcome Trust (see http://www.acu.ac.uk/conferences/collaborating_with_the_commonwealth/wellcome2011)
- European Union - FP7-AFRICA-2010 (see http://cordis.europa.eu/fp7/dc/index.cfm?fu seaction=UserSite.FP7DetailsCallPage&call_id=268)
- British Council (see <http://www.britishcouncil.org/delphe-what-is-delphe.htm>)

- What others?

Funding Sources for UK based researchers

- Research Councils
- Royal Society of Edinburgh
- Scottish Funding Council
- Technology Strategy Board
- British Council
- National Endowment for Science, Technology and the Arts (NESTA)
- Royal Academy of Engineering
- The Royal Society
- Wellcome Trust
- Nuffield Foundation
- Leverhulme Trust
- British Academy
- Joseph Rowntree Foundation
- European Union
- Cancer Research UK
- British Heart Foundation
- NHS

Identifying Funding Opportunities

- Regularly check the websites of the main funding bodies for your work
- Register for updates with the Research Councils
- Register with Research Professional
http://www.researchresearch.com/index.php?option=com_content&view=article&id=24&Itemid=24
- Visit the Community of Science Portal
<http://www.cos.com/>

Types of Funding Opportunities

Responsive (inc. Blue Skies Research)

- Responsive grants are designed to provide funding to researchers to enable them to carry out research projects of novelty, timeliness and promise to the funding agency.

Strategic Initiative

- Strategic grants fund research of intellectual and wider cultural, social or economic urgency that the funder considers is best supported by concentrated investments. These research initiatives are generally directed towards specific objectives, have a certain amount of funding associated with them, and run for a set period of time.

Types of Funding Opportunities



Individuals/Teams

- Small/Large Grants
- Young/New Researcher Schemes
- Research Leave
- Research Fellowships
- Travel & Conference Awards
- Equipment/central facilities usage
- Public engagement Awards
- Knowledge Transfer Awards

Groups & Networks

- Research Centres
- Research Networks
- Travel Awards
- Workshop and training events

Check Funders' Rules, Regulations and Guidelines

- Deadlines
- Limits of award
- Ethics
- Acceptable expenses
- Word limits
- Nominated reviewers
- Previous applications

Next Stages

- Project design
- Costings
- Project re-appraisal
- Submission
- Review

Project Design

- Feasibility
- Methodology
- Ethics
- Collaboration & IPR
- Staffing
- Equipment
- Other resources

Costings

Directly incurred costs

- Project staff (directly working on project, not PIs), travel, equipment, consumables, publication costs, recruitment and advertising costs, etc

Directly allocated costs

- PIs & Co-Is non directly working on the project, Estates, pooled resources (e.g. technical assistance)

Project re-appraisal

- Initial project design is likely to be revised in the light of costing information and feedback from others.

Submission

Deadlines

- **Institutional Costing Form** (At HWU -Research Proposal Costing (RPC) form signed and submitted to school administrator-School approval must be obtained before submission to research office)

Electronic submission

- Many funders now use electronic submission processes
- Accounts are accessible by Principal Investigators, Co-Applicants and Administrators
- Final electronic proposals can only be submitted electronically to funders by recognised institutional representatives (TRS)

Paper submission

- Check number of of copies
- Ensure enough time for delivery

Heriot-Watt University Process



Research Idea ↔ Identify Funding Source

↓
Confidentiality Disclosure Agreement

↓
Project design – Scientific Case

↓
Identify costs associated with project

↓
Complete RPC form and Je-S (or equivalent) & submit
to school research administrator or Research Office

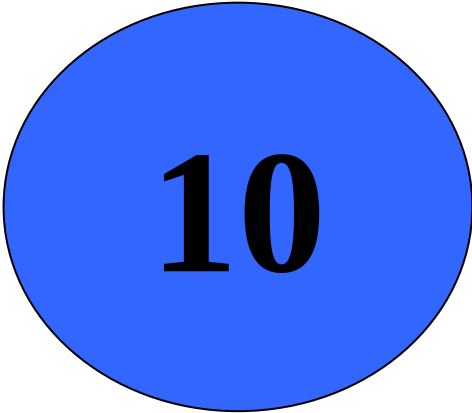
----->-----
↓
Gain University representative's authorisation

↓
Final submission

At least 10 Days
before deadline

Exploring funded projects

Examine a sample of the summaries of projects that have been funded.



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Drafting a proposal summary

- Draft a 200 word summary of your proposal along the lines of those you have just read.

Feedback

- Exchange your draft summary with someone else. Give each other feedback on the proposal. Use the checklist provided by the ESRC.

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How applications are judged

- Nominated reviewers
- Peer college v external reviewers

EPSRC Peer Review Principles

- Transparency
- Appropriateness
- Managing Interests
- Expert assessment
- Prioritisation
- Right to reply
- Separation of Duties
- No parallel assessment

See <http://www.epsrc.ac.uk/ResearchFunding/ReviewingProposals/Principles.htm>

EPSRC Referees Form

Referees are asked to grade or comment on:

- Significance and potential of the research
- Degree of novelty or risk
- Degree of researcher training and development
- Value of collaboration
- Ability of the applicant to deliver
- Planning and management
- Resources requested
- Potential contribution to knowledge transfer

EPSRC advice on responding to reviewers comments

- Use clear headings (for example, to group common issues rather than organising your response by reviewer)
- Refer to parts of your proposal that you feel already address the reviewers' concerns
- Use references to publications to add weight to your argument
- Only include figures if they are genuinely helpful
- Keep to the issues and avoid wasting space thanking reviewers or copying at length what they have already said.

Success Rates

- Published annually by most funding agencies
- Vary according to type of Mode
 - Generally thought that strategic mode has more chance of success
- RCUK provides links to all the research councils' success rate details at
<http://www.rcuk.ac.uk/aboutrcuk/efficiency/demand/successrates/default.htm>

Success Rates

Funder	Number of Applications	Number Funded	2007/08 Success Rate	2008/09 Success Rate
NERC	1685 (1475)	404 (408)	28%	24%
MRC	1924 (1141)	400 (307)	27%	21%
ESRC	1251 (1100)	238 (267)	24%	19%
EPSRC	4334 (4758)	1148 (1422)	30%	26%
BBSRC	2033 (1983)	468 (581)	29%	21%
AHRC	1830 (1645)	329 (406)	25%	18%

FIGURES IN BRACKETS ARE FOR 2007/08

Generally, Strategic mode has a much higher success rate (ca 40% in 2007/08)

The HWU Processfor PI's:

- **Draft costing of the proposal.**
- **Inform School Administration – so they can open an oracle project for the proposal and give it a project number.**
- **Consider whether there are any ethical, legal or IP implications within your project – if so seek the appropriate advice.**
- **Finalise costing and sign rpc, then submit to School Administration.**
- **Submit proposal to School, then TRS, for approval via the appropriate method.**

Post Award Monitoring & Evaluation

- Financial monitoring
- Annual Reporting
- Final Evaluation
- Peer review and grading

Post-award steps:

1. Project set-up
2. Project monitoring
3. Running the project
4. Periodic reports and claims
5. Final report
6. Project closure
7. Post project

Taken from <http://www.vitae.ac.uk/policy-practice/291101/Post-award.html>

Classic Pitfalls of Writing

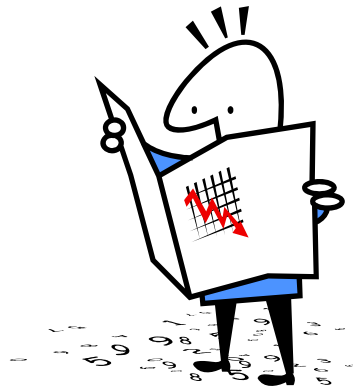
- Spelling
- Punctuation
- Design
- Structure
- Ambiguity
- Poor Phrasing
- Length



Golden Rules for Good Design

- Give it more space
- Break up large blocks of text
- Use variety – indents, bullet points

The 'FOG' Index



The FOG index

- Select a passage of ca. 100 words (C).
- Calculate the average sentence length (ASL).
- Count the affixes (A)
- Count the no of names and personal pronouns (P)

$$FI=ASL+(A-P)/ASL$$

- 0-20 Easy
 - Above 36 is fairly difficult
 - Over 50 is unreadable
-
- http://www.writersservices.com/wps/s1_readability_score.htm

Flesch-Kincaid Grade Level

Microsoft Word will calculate this for you automatically

- Word compiles the Average number of Syllables per Word(ASW) and average sentence length(ASL) which it uses to calculate readability ratings.

$$(.39 \times ASL) + (11.8 \times ASW) - 15.59$$

- It is designed for US school level. So a score of 8.0 means that an eighth grader (ca. 13 years old) can understand the document.

Tips for Success

- Allow sufficient time
- Study the funding source
- Read the rules & guidance
- Identify and justify the costings
- Don't trawl different funders with the same proposal
- Prepare an outline/summary proposal and discuss the application with colleagues
- Get hold of examples of successful proposals
- Stick to word limits
- Think about the reviewers (Charities may include lay people)

Heriot-Watt Support for Developing a Research Proposal



Technology and Research Services (TRS)

Support the grant application process

- Full Economic Costing
- Staffing
- Procedures
- Authorisations (including submission)
- Various funder-specific workshops and initiatives

Organisational Development

Provides CPD opportunities for research

- Writing Proposals for Research Grants
- Getting Grant Funding

What support is available in your institutions?

Resources

Where to find Summaries of research projects funded by different funding agencies:

EPSRC-Grants on the web

<http://gow.epsrc.ac.uk/>

NERC Grants on the Web

<http://www.nerc.ac.uk/research/gotw.asp>

Nuffield Foundation – Grants Awarded

http://www.nuffieldfoundation.org/go/grants/ncdf/page_131.html

ESRC – Our Research

<http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/research/>

EU Framework 7

http://cordis.europa.eu/fp7/projects_en.html

Resources

ESRC How to write a good application

<http://www.esrc.ac.uk/funding-and-guidance/guidance/applicants/how-to.aspx>

Burroughs Wellcome Fund (2006) Making the right moves: A practical guide to scientific management for postdocs and new faculty, Howard Hughes Medical centre, Maryland. {available at <http://www.research.ubc.ca/Uploads/Docs/Howard%20Hughes.New%20Faculty%20guide.pdf>}

Tomorrow' s Professors mailing List

<http://cgi.stanford.edu/~dept-ctl/cgi-bin/tomprof/postings.php>

- Funding Your Best Ideas: A 12-Step Program
<http://cgi.stanford.edu/~dept-ctl/cgi-bin/tomprof/posting.php?ID=688>

Vitae Leadership Development for Principal Investigators

<http://www.vitae.ac.uk/policy-practice/263521/Leadership-development-for-principal-investigators.html>

Links to Funders Application Guidelines



BBSRC http://www.bbsrc.ac.uk/web/FILES/Guidelines/grants_guide.pdf

EPSRC

<http://www.epsrc.ac.uk/ResearchFunding/HowToApply/FundingGuide.htm>

NERC <http://www.nerc.ac.uk/funding/application/researchgrants/>

ESRC

http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/opportunities/research_funding/index.aspx

WELLCOME TRUST <http://www.wellcome.ac.uk/Funding/index.htm>

NUFFIELD FOUNDATION

http://www.nuffieldfoundation.org/go/grantprogrammes/page_577.html

EUROPEAN UNION FP7 http://cordis.europa.eu/fp7/home_en.html

Good Luck with Your Proposals!