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School of Social Sciences
University of Dundee
Grant Application Writing Workshop
23 October 2017

Programme

- What a Grant Application has to Achieve
- The Magic Formula
- Recipe for a Case-for Support
- The Key Sentence Technique
- Do you have a fundable project
- What is a Sub-project?
- Aims and Objectives
- Writing Guidelines
- Key Sentences and Structure
- Preparing Ingredients
 - The Success Proposition
 - The Importance Proposition
- Goal Sentence Exercise

Introduction

This course tells you how to get working on an extremely efficient 'recipe' for writing an application for a research project grant, such as a research council standard grant.

The course deals with the following issues:-

- Writing a grant application is very difficult unless you design a fundable project before you start. We will discuss how you can assess whether you have a project that is fundable.
- The way funding decisions are made imposes very strict (but unacknowledged) requirements on a grant application.
- It is possible to work out what properties a case for support needs to have to meet all the requirements.
- We will discuss how the case for support in a grant application can work as a sales pitch.
- We will discuss a 'recipe' a step-by-step guide to writing a document that meets all the requirements for success.
- We will discuss how you can compose a set of aims and objectives that will strengthen your chance of getting funded.
- We will discuss how the requirements of a grant application dictate writing style, and some common academic writing habits that you need to eliminate from your grant applications.

My delivery style is interactive, so feel free to ask questions throughout the day. This handout contains all the visual material to be used during the day with clickable links to the main sections in the programme (above) and to the full contents slide-by-slide (below).

Andrew Derrington

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What a Grant Application has to Achieve

Why you need a magic Formula

Andrew Derrington

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A good case for support is designed for the decision process

1. What do funders want to know?
2. How do funders make decisions
 - What are the implications?
 - The Case for Support as Sales Pitch
 - The Magic Formula

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Grant Funders have 4 Questions about the Project

1. IS THE PROJECT IMPORTANT (to Them)?
 - Direct Outcomes (discoveries)
 - Indirect Outcomes (training, career development, mobility...)
2. WILL THE PROJECT BE SUCCESSFUL?
 - Will it produce the direct outcomes?
 - Will they be put to use?
 - Will it produce the indirect outcomes?
3. ARE THE APPLICANTS COMPETENT?
 - Can they carry out the project?
 - Can their institution support it?
4. WOULD A GRANT BE VALUE for MONEY?
 - Are the resources requested Necessary, Sufficient, and Proportionate (for the project)

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Answers to Funders' Questions

- IMPORTANCE (evidence)
 - Evidence about direct outcomes in literature review
 - Evidence about indirect outcomes in details of project, institutions, & investigators
- SUCCESS (project details)
 - Research activities in relation to outcomes?
 - Impact and dissemination plans..

- COMPETENCE (evidence)
 - Evidence that the team has the necessary skills in publications (quality and authorship).
 - Evidence that PI and institution can deliver the project in track record & facilities.
- VALUE for MONEY (project details)
 - Mention how grant resources will be used in the project.
 - Mention institutional resources needed for the project.

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The Decision

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- Who decides?

...

- Committee of successful researchers
 - Very busy people
 - Very successful
 - * Have their own grants
 - * And research groups
 - * And jobs
 - Not knowledgeable about your particular research area.
- May have 'user' representation
- Supported by secretariat

The Decision: what information do they have?

- Applications
 - Usually a set of 50-100 per meeting.
 - Arrive 3-6 weeks before meeting.
 - Everybody delays reading them as long as possible.

...

- Expert referees' reports
 - Written reports with evaluation and score.
 - Usually 2-5 per application
 - Usually arrive before the meeting but often after the applications
 - Often conflicting

...

- Designated members' reports
 - Oral report by 2 or 3 members who have read the application.

- Usually lasts < 5 minutes

The Decision: what is the process?

- Designated members report on the proposal
 - Usually less than 5 minutes
 - Who, what, why, how, outcomes, strengths, weaknesses, summary of referees, how important and exciting, suggested score
 - One person may have to do this for 10 or more grants in a day.
 - Probably based on 30-60 minutes preparation.

. . .

- Discussion by all members of the committee.
 - Even though some of them may be reading it for the first time during the discussion.
 - * They will probably have read the summary beforehand.

. . .

- All members in the discussion can influence the score.
 - No matter how little they know.
 - And how little time they have spent reading your proposal.

Implications of the decision process?

- Referees will analyse your grant in detail but:-
 - Most of the committee won't read it.
 - The ones who do read it won't know the field.
 - There will be about 100 other applications.
 - This imposes requirements on the case for support.

. . .

- It must make the four propositions and it must be:-
 - Easy to analyse at a deep level (Referee).
 - Know what's in it by skimming it (Committee Member).
 - Learn the subject by reading it (Committee Member).
 - Memorable and Distinctive (Designated Member).

. . .

- These properties need a [magic formula](#)

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The Magic Formula

- [The Key Sentence Technique](#)
- [Key Statements](#)

- Layout
- Tag Phrases
- Repetition

The Key Sentence Technique

- Create a skeleton of about ten '*key sentences*' that state the main points of the Case for Support.
 - the overall research goal,
 - what makes the goal important,
 - the sub-goals
 - etc
- Use the key sentences as an organising framework for writing the Case for Support,
 - Each key sentence is the first sentence of a subsection of the Case for Support
 - * Rest of the subsection develops the point
 - Use the key sentences as the Summary and
 - as the Introduction.
- Reader gets the same picture, no matter what they read
 - Summary only
 - First few lines of case for support
 - Every word.

The Skeleton

10 statements define a (grant application) case for support

- **Goal** States the overall goal the specific approach & an example of success with that approach
- **Importance** Says what makes the overall aim important
 - Linking **Importance** with **Goal** makes the Importance Proposition
- **Sub-goal-1, Sub-goal-2 & Sub-goal-3** Say what we need to know (AIMS) & why.
- **Project** Introduces the project
- **Sub-project-1, Sub-project-2 & Sub-project-3** Say how the sub-projects (OBJECTIVES) will produce what we need to know.
 - Linking **Sub-goals** to **Sub-projects** makes the success proposition.
- **Concluding** Says what will happen when research is done (Impact?)

...

- Use the key statements as the summary.

...

- Re-use the key statements to introduce the case for support

...

- Use a key statement to begin each subsection
- Then follow it with the detail
 - that convinces the referee

Magic Formula

Use Layout to Communicate with Skimmers and Speed-Readers

- Message on first line of paragraph (ASSERT then JUSTIFY)
 - First sentence of para ASSERTS (topic sentence)
 - Remainder of para JUSTIFIES
 - * This is where you cite literature
 - * This is how you avoid citing too much literature.

...

- White space above each paragraph

...

- Readers' eye movements land on blank lines.
 - Speed-readers will read first line of every paragraph.
 - Browsers will only read first lines.
 - Detail readers will know what to expect in each para

Magic Formula

Teach Terminology with Tag Phrases

Sub-goal-1, Sub-goal-2 & Sub-goal-3 Key Sentences

- 'We need to know' + tag phrase because....
- We need to know the relationship between the performance of single neurons and the performance of the whole visual system in order to establish the likely contribution of single neurons to perception.

...

Sub-project-1, Sub-project-2 & Sub-project-3 Key Sentences

- 'We will do this sub-project in order to discover' + tag phrase
- We will record single neurons during perceptual tasks and calculate sensitivity functions for neural responses and for task performance in order to characterise the relationship between the performance of single neurons and the performance of the whole visual system.

...

- Tag phrases provide meaning - link between aims and objectives
- Use them in headings (make them short enough)
- Key sentences and tag phrases start off messy and long-winded, like these.

...

- You have to edit them to make them effective.

Magic Formula

Tag Phrases in Use

The perceptual capabilities of single neurons in cortical area V1

We need to know the perceptual capabilities of single neurons in cortical area V1 in order to establish the potential contribution of V1 to perception. The potential contribution can be assessed using a range of perceptual tasks, such as visual pattern discrimination, object discrimination, and motion-detection. For any such task, we can infer the contribution of cortical area V1 to that task from the relationship between the perceptual capabilities of single neurons and the perceptual capabilities of the individual.

This is the start of a sub-section of the background. There will be a couple of pages of text (at least 3 subsections, each with its own heading) between it and the start of the corresponding sub-section of the description of the project, which follows here.

Measuring the perceptual capabilities of single neurons in cortical area V1

We will measure how neural response varies with stimulus strength during perceptual tasks in order to measure the perceptual capabilities of single neurons in cortical area V1. Stimuli from a set that covers a range of strengths will be presented repeatedly in random sequences under computer control. The computer will record responses during the presentations, and during equivalent periods when no stimulus is presented, for off-line spike sorting and analysis.....

[Magic Formula](#)

Tag Phrases in Red

The perceptual capabilities of single neurons in cortical area V1

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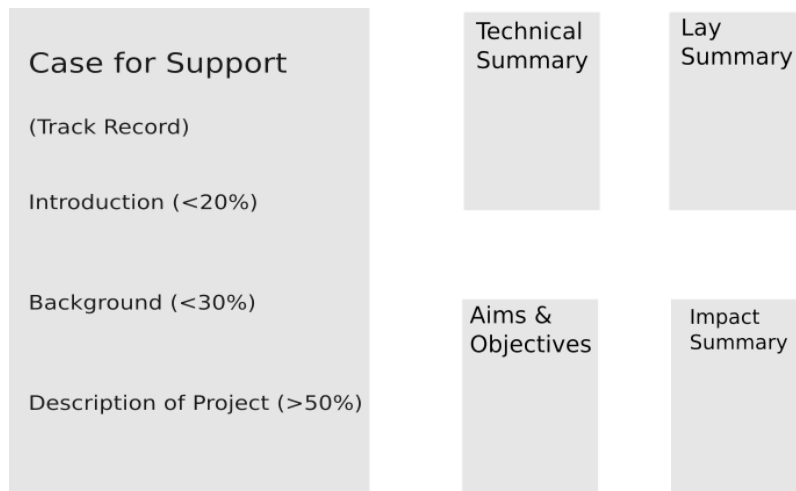
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[Magic Formula](#)

Re-cycle Text From Case for Support



- Repeat key sentences and tag phrases
 - to provide common structure, and
 - to link
- Maintain structure and order

Magic Formula

Resources

What's been funded?

- Research Council Project Summaries
 - <http://gtr.rcuk.ac.uk>
- ERC Summaries
- Leverhulme Awards 2016

Advice on writing:- www.parkerderrington.com/blog

- [How to construct a project](#)
- [The key sentences](#)
- [Catalogue](#)

Magic Formula

The Recipe

- [Make sure you have a fundable project](#)
- [How the Structure Works](#)
- [Prepare your Ingredients](#)
 - [Success Proposition](#)

- Project Intro & Outtro
- Importance Proposition
- Write a Grant in 10 Steps

Do you have a fundable project?

1. Say what your project aims to achieve (the goal) in terms intelligible outside your research discipline.
2. How will your project achieve its goal?
3. Give an example of your success with this research approach.
4. Can you split your goal into three sub-goals?
5. For each sub-goal:-
 - State the sub-goal (ideally as something we need to know).
 - Describe how the research will achieve the sub-goal.
 - Say what makes it important to achieve the sub-goal in the context of the project.
6. What makes the project suitable for the funder (and scheme) you are targeting?
7. Impact
 - Who will benefit most from this research?
 - How will they benefit?
 - What will you do to ensure that they benefit?

If you start writing a grant application without answering these questions, you might never finish.

How the Structure Works

1. **Goal:** States overall GOAL (AIM, RQ, Hypothesis)
 - Starts the introduction.
 - Breaks GOAL into sub-goals (G_1 , G_2 , G_3)
2. Background - sells GOAL, Establishes criteria for success
 - **Importance:** Sells GOAL => *IMPORTANCE PROPOSITION*
 - **Sub-goal-1:** Explains & Sells G_1
 - **Sub-goal-2:** Explains & Sells G_2
 - **Sub-goal-3:** Explains & Sells G_3
3. Methods. Project meets criteria for success
 - **Project:** Introduces the project.
 - **Sub-project-1:** How sub-project 1 will deliver G_1
 - **Sub-project-2:** How sub-project 2 will deliver G_2
 - **Sub-project-3:** How sub-project 3 will deliver G_3
 - Project delivers GOAL => *SUCCESS PROPOSITION*
 - **Concluding:** Says what happens after the project.
 - Depends on funder & **Importance:**
4. Some funders require section on track record & environment
 - Track record shows all necessary skills
 - Environment has all necessary infrastructure & support
 - => *COMPETENCE PROPOSITION*

The Key Statements

Sub-goal and Sub-project Sentences

- **Sub-project:** Sentences “This will tell us” (One per Subproject)
 - Says how a sub-project will achieve a SUB-GOAL.
 - “We will do whatever the research consists of and this will achieve the SUB-GOAL”
 - Structures the Research Plan/Methodology. Introduces a subsection.
 - States an OBJECTIVE or Work Package (and the SUB-GOAL it will deliver).

▪

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- **Sub-goal** Sentences: “We need to know” (One per subproject)
 - Say what a SUB-GOAL consists of (& why it’s important)
 - “We need to achieve a SUB-GOAL for whatever reason”
 - Structures the Background: Introduces a subsection
 - Sub-Goal can be expressed in terms of Aim, Research Question, or Hypothesis
 - * You must use these as different ways of expressing THE SAME THING (ESRC)

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- Rookie mistakes
 - SUB-GOAL_{Sub-goal} SUB-GOAL_{Sub-project}
 - Failing to mention research activities in **Sub-project** Sentences
 - Describing the research activities instead of outcomes in **Sub-goal** Sentences

Example

Project & Concluding Sentences

Project

- **Project** sentence summarises the project in whatever way is appropriate
 - If they only read 1 sentence about your project, what do you want it to say?

Concluding Sentence

- Introduces your discussion of what will happen after the research is complete
- It will depend to a certain extent on whether the importance is academic or practical or both.
 - e.g. State in about 40 words what you will do to maximise the benefit from the project.

Goal & Importance

The Elevator Pitch (Makes the Importance Proposition)

1. **Goal** Sentence should have 3 parts:-

1. What the project will achieve, in 'big picture' terms.
2. How it will achieve it (your research approach).
3. An example of your achievements using that approach, to show you are competent.

. . .

2. **Importance** sentence says what it is that makes the outcome important. For example...

1. Quantify the real-world problem it will help to solve.
2. Say what it will allow us to do that we can't do now.
3. Prepare to say which named priorities of your funder it contributes to, and how?

Sub-projects

What is a sub-project?

- You break your project into components (subprojects) to make it easier to explain.
 - The sub-projects can be sequential
 - Or parallel
 - Or even different analyses of the same data
 - The only requirement is they produce different, important outcomes.

. . .

- Each sub-project produces an important outcome
 - The outcomes map onto the aims or research questions.
 - * Which you use to structure the background section of the case for support.
 - That way the explainer will give your sales pitch.
 - Because they will have read the background before the description of the project.

. . .

- The perfect number of sub-projects is 3, but 4 is OK.

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- Don't create dependencies on uncertain outcomes (hostages)

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Aims & Objectives

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- Nobody is sure what Aims & Objectives mean, so you can hijack them to reiterate the sales pitch.

. . .

- Background/Literature review

- Explains how 3 research outcomes are really important.
- Make achieving the outcomes the AIMS
- You could also couch them in terms of hypotheses or research questions.
- Description of Project/Methods/Research Plan
 - Describes the research activities in each of 3 [sub-projects](#) and makes it clear that they will produce the 3 important outcomes.
 - Make the subprojects the OBJECTIVES.
 - You could also call them Work Packages.

...

- The AIMS and OBJECTIVES deliver the sales pitch.
 - [Use Tag Phrases so Aims match Objectives](#)
 - Order them so they match the structure and the wording of the case for support.
 - Always try and give both, even if you are only asked for one.

Strategy

Your strategy must accommodate the likelihood of rejection

- Most well-written grant applications get rejected.
- Rejection can be a devastating experience

...

- If you need a grant, you should plan to write 5 or 6 based on the same set of ideas
- Never get down to your last rejection.
- If you get 6 rejections, it's time to develop a new set of ideas.

...

- You need to be able to multiplex grant applications
 - Different Outcomes?
 - Different Datasets?
 - Different Objectives, Same Aims?
- You need to be able to write well and quickly.

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Should I use a successful application as an example to copy?

- About 75% of funded applications are very badly written
- Apply the following test

...

- Can you find single-sentence answers to the following questions in 10 minutes:-
 1. What is the overall aim of the project?
 2. What makes the aim important?
 3. What are the overall research methods?

4. For each aim or research question (there should be 3 or 4):-
 1. What is the aim or question?
 2. How will the research will answer this question or meet this aim.
 3. What makes it important to answer this question or meet this aim in the context of your project.

. . .

- If you can't, it's a bad example to follow.

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Writing Guidelines

- No Synonyms
 - Pick the best term and use it repeatedly.

. . .

- No Homonyms

. . .

- Always Tell then Explain
- [Key statement](#) at the start of every section
- Re-use [tag phrases](#) across key statements & in headlines

. . .

- Punchline at top of para (~6 paras per page)
- Start with the 'Topic Sentence' . . .
- Strong Verbs (no adverbs, no [nominalisations](#))

. . .

- Sentences as Short as Possible
 - How short is "as Short as Possible"
 - [Health Check](#)

. . .

- Avoid value claims (state evidence instead)

. . .

- Bullet lists good, lists in sentences bad.

. . .

- NIUTEIISPOU

. . .

- – No initialisations unless the expansion is in the same paragraph (or unnecessary)

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Nominalisations

- A nominalisation is a noun phrase constructed from a verb,
 . . .
- which can be used with a general purpose verb to create a flabby, pompous, long-winded way of saying something simple.
 . . .
- We will investigate X
 - We will carry out an investigation into X
- We will analyse
 - We will undertake an analysis of

Write a Grant in 10 Steps

1. You can start as soon as you have thought of a viable project.
2. Check that the project is suitable for your chosen funder and funding scheme.
3. Divide the project into sub-projects and assemble the information you need to describe them and justify them.
4. At this stage you should be able to initiate the costing process & institutional approvals in parallel with the writing.
5. Draft your Key sentences in this order:-
 - i. *Sub-project* sentences.
 - ii. *Sub-goal* sentences.
 - iii. *Project* and *Concluding* Sentences
 - iv. *Importance* sentence.
 - v. *Goal* sentence

If you will need a summary for a lay audience you should begin working to prepare and test it at this stage.
6. Use the key sentences as the skeleton and write the subsections of the case for support.
7. Add any funder-specific information or sections to the case for support.
8. Draft any required information on the project timetable and project management.
9. Assemble the budget and write the Justification of Resources
10. Finalise any attachments and summaries you need to submit.

Goal Sentence Exercise

Why is the first sentence important?

- . . .
- It has to be good enough to make the reader read on
 - They will have 99 other applications.
 - They know most of them are headed for the shredder.
 - They also have a TV.
 - What will make them want to read your application?

. . .

- Importance?
- Success?
- Competence?

The Perfect Goal Sentence

1. What the project will achieve, in 'big picture' terms.
2. How it will achieve it (your research approach).
3. An example of your achievements using that approach.

. . .

1. Importance
2. Success
3. Competence

The Exercise

1. Interview your neighbour (3 mins)
2. Swap roles and interview again (3 mins)
3. Write a sentence for your neighbour's project (2 mins)
4. Write a Sentence for your own Project (2 mins)
5. Optimise and discuss.

. . .

Remember

1. What the project will achieve, in 'big picture' terms.
2. How it will achieve it (your research approach).
3. An example of your achievements using that approach.

Presenter



Andrew Derrington has in-depth experience of the research funding process. He obtained his first research grant, a Beit Memorial Fellowship for Medical Research, while he was writing his PhD. His research was continuously funded by fellowships, project and programme grants for the next 30 years. He served on research grant committees for The Science and Engineering Research Council, the Medical Research Council and the Wellcome Trust. His book, *The Research Funding Toolkit*, which he co-wrote with Jacqueline Aldridge, research and enterprise associate in the School of Psychology at the University of Kent, is the definitive guide to grant writing for early career academics and research professionals. It is based on Andrew's analysis of how grants committees make funding decisions.

Andrew has worked in eight Universities including two in the world top ten.

He has also worked as a journalist. Over several years he wrote two successful columns in the Financial Times. *The Nature of Things* covered science - from astrophysics to zoology. *Psych Yourself Up* was a guide to the different psychotherapies available in the UK.

Andrew set up [Parker Derrington Ltd](#) in 2013. He now works as a consultant, writing research grant applications and providing strategic advice and training to individuals and organizations.

Testimonials

I had a fantastically useful time attending your recent workshop at Leicester University. Writing the 10 key sentences was a very useful exercise and I have, since, worked on them to discover they are a fab tool for any kind of writing really.

Dr Ranjana Das, University of Leicester

Andrew blends easy authority and extensive experience with humour and approachability. The result is a workshop full of practical, memorable advice on how to compete more successfully for research funding.

Professor Peter Clegg, Institute of Ageing and Chronic Disease, University of Liverpool

I attended one of Andrew's workshops when I was a senior lecturer. The hands on advice about how to structure my applications in a really appealing fashion enabled me to win a grant of nearly £600K the next year. I still implement the advice that I received in that workshop, and pass it down to junior colleagues. I find that Andrew's advice has a high success rate!

Prof Theresa Gannon, University of Kent

I still use the tips you gave me for my successful Wellcome SRF application. Your advice on "12 key sentences" is spot-on and helps people focus on the aspects of the proposal that are critical to success instead of getting bogged down in reams of text.

Prof Mark Baxter, Mount Sinai School of Medicine

Andrew's grant-writing workshops teach you how to convince the world that it needs your research. They are the most useful training events I have ever attended. His advice about how to sell the big idea without compromising on the science was critical to the success of our £9.3 million ESRC application.

Prof Julian Pine, University of Liverpool