Writing Research Grant Applications

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Programme

Things you Need to Know

- Where to get a handout
- Funding Strategy
- Are you ready to start?
- Why You Need a Magic Formula
- The Magic Formula
- Sub-projects
- Aims and Objectives
- Writing Guidelines
- Recipe to Create the Magic Formula

Exercises

- **Promise** Sentence Exercise
- Pairing Exercise
- **Implementation** Sentences
- **Problem** Sentences
- Write the **Project** & **Next** Sentences
- Write the Global Sales Pitch
- Review Exercise
- Examples

Are you Ready to Start ***

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If impact is part of the funding criteria:-

- Who will benefit most from your research?

- How will they benefit?
  - What will you do to ensure that they benefit?
  - What is their involvement in the development of the project?

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Your application will need to answer all these questions.

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How to turn a small number of ideas into a large number of grant applications

- Different Outcomes? (Derrington method)
- Different Datasets? (Dr Pig method)
- Different collaborators/consortia/industrial partners
  - Your central skill contributes to different questions.
  - Check collaborators before you commit
- Different Approaches to Answer the same Question?
- Different Combinations of Sub-Projects

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  - Especially those from senior academics.

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

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Before you follow an example, test it:- find one-line answers to the following questions:-

1. What is the overall aim of the project?
2. What makes the project important?
3. What are the overall research methods?
4. State the 3 or 4 main problems the project needs to solve
    a Why is each one important?
    b How will the project solve the problem?
5. What will happen after the project is done?

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- If finding and writing down those answers takes more than 10 minutes, the answer is "No".

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- Create tag phrases
- No Homonyms: ambiguity is your enemy.
- Short paragraphs (~6 paras per page)
- Short Sentences (easier if you avoid adverbs, adjectives and nominalisations)
  - And know when to use the passive (e.g. "Rules were made to be broken.")
- Use Headings and Sub-Headings
  - Re-use phrases from the key sentences
- Use similar structures for sentences with similar function.
- Avoid value claims (state evidence instead)
- Bullet lists good, lists inside paragraphs bad.
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- Useful Software (if you don't like the tools in MS Word)
    - The Writers' Diet
    - HemingwayApp also available as a text editor.

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- You can make it more pompous and long winded by using a few adjectives to describe the nominalisation:-
  - We will undertake a detailed, rigorous and searching analysis of …
- But sometimes a nominalisation is what you need:-
  - "Our aim is to ….." is better than "We aim to…." if you want to discuss aims.

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- Don't create a hostage situation.
  - A sub-project that cannot be done unless a previous sub-project produces a result that it is not certain to produce.

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Why wouldn't you just use the key sentences?

- Overall Aim
  - **Promise + Importance** sentences
- Specific Aims
  - 3 **Problem** sentences . . .
- Overall objective or intro to objectives
  - **Project** Sentence
- Specific Objectives
  - **Implementation sub-project** sentences
  - Maybe add the **Next** sentence as a final objective

Alternatives

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No Synonyms

- **Problems** = Aims = Research Questions = Hypothesis Tests

Why you need a magic formula ***

The Case for Support must persuade the funder to fund your project.

1. What do funders want?
   - This tells you what information the Case for Support must include.
2. How do funders make decisions
   - This tells you the requirements for the Case for Support.
   - You need a magic formula to meet them.

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- Are the resources requested Necessary, Sufficient, and Proportionate (for the project)

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Where?

- First two key sentences
- First two sections

Example

The Success Proposition *** **

How you convince the reader your project will be successful.

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- Problems in the Background
    - can be expressed as RESEARCH QUESTIONS, AIMS, OBJECTIVES or HYPOTHESES
- Research in the Methods/Research Plan section (Implementation)
    - Describe the research in each of 3 sub-projects
    - Make it clear that the sub-projects will solve the problems.
        - Sub-projects can be referred to as "OBJECTIVES" or "WORK PACKAGES".
- Always match the background to the research plan, even when they are entries on a form.

The Competence Proposition *** **

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Where?

- Track record and Environment section
- CV
- Background to case for support
- Methods

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The Value for Money Proposition *** **

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1. Mention the resources to be used in the project
   - Resources funded by the grant are necessary
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- Where?

- (1.) Above must be in the description of the project.
- (2.) Above in Justification of Resources.

NEVER try to compete on price

- IMPORTANCE?
  - Pick an important question
  - Start the literature review
  - ……

That's how you write a zombie grant…

- If describing the project takes less than half the case for support it is probably a 'zombie'.

The Decision *** **

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- May have 'user' representation
- Supported by secretariat

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- Designated members' reports
  - Oral report by 2 or 3 members who have read the application.
  - Usually lasts < 5 minutes

- Designated members report on the proposal
    - Usually less than 5 minutes
    - Who, what, why, how, strengths, weaknesses, summary of referees, conclusion, suggested score
    - One person may have to do this for 10 or more grants in a day.
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- 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 *** **

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Referees will analyse your case for support in detail but:-

- They will do it better if you make it easy
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  - Success
  - To remember the main points (Designated Member).

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Perhaps you need a Magic Formula

The Magic Formula *** **

Components

1. The Key Sentence Technique
2. Layout
3. Tag Phrases
4. Repetition

The Key Sentence Technique *** **

- What does your project **P**romise?
- What makes that promise **I**mportant,
- What **P**roblems do you have to solve (there will be 3)
- Introduction to your **P**roject in one sentence
- **I**mplementation (3 sub-projects that solve the 3 problems)
- What happens **N**ext
- Examples
- PIPPIN "An excellent person or thing" *Oxford English Dictionary*
- Use the key sentences as a framework for writing the Case for Support
    - Each key sentence starts a section of the Case for Support
    - Rest of the section develops the point
- Use the key sentences as the Summary
- and as the Introduction
- Every Reader gets the same picture, no matter what they read
    - Summary only
    - First few lines of the case for support
    - Every word of the case for support.
- Create your own key sentences if the case for support has to make other points
    - Track Record
    - Other kinds of application (fellowships, networks, training grants).

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2. 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

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Implementation Key Sentence

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- Key sentences and tag phrases start off messy and long-winded, like these.
  - You have to edit them to make them effective.

Examples.

Tag Phrases in Use

- Start of a **Problem** sub-section in the background.

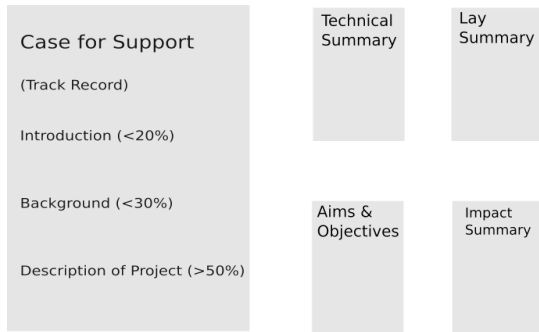The perceptual capabilities of single neurons in cortical area V1

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.

- Description of corresponding **Implementation** Sub-project

Measuring the perceptual capabilities of single neurons in cortical area V1

We will measure neural responses as functions of stimulus strength during perceptual tasks in order to calculate 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.......

Repetition ***

Re-cycle Text From Case for Support

Case for Support	Technical Summary	Lay Summary
(Track Record)		
Introduction (<20%)		
Background (<30%)	Aims & Objectives	Impact Summary
Description of Project (>50%)		

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

Resources ***

What's been funded?

- Research Council Project Summaries
- ERC Summaries
- Leverhulme Awards 2016

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

- How to construct a project
- The key sentences
- Catalogue

***

The Recipe ***

Process

- Make sure you have a fundable project

- Prepare your Ingredients

  - Implementation sentences

  - Problem Sentencess

  - Project & 'Next' Sentences

  - Elevator Pitch

- Build the Case for Support

- Write a Grant in 10 Steps

Describe a sub-project and say what problem it will solve.

We will measure neural responses as functions of stimulus strength during perceptual tasks in order to calculate the perceptual capabilities of single neurons in cortical area V1.

- There will be three.
- The sub-projects will solve the three **problems** in order.
  - Define the sub-projects before you define the **problems**
- Common mistakes
  - Failing to describe research
  - Failing to say what problem it solves
  - Forgetting to use the same description as the **problem** sentence.
  - Changing the syntactic structure unnecessarily
  - Too long
- Examples

State a research problem (& why it's important)

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.

- There will be three
- They will state the problems that are solved by the **implementation** sub-projects
- Common mistakes
  - Different statement of the research problem from that in the corresspponding **implementation** sentence
  - Describing the sub-project instead of stating the problem
  - Changing the syntactic structure unnecessarily
  - Too long
- Examples

Project

- **Project** sentence summarises the project in whatever way is appropriate

- If they only read 1 sentence about your project, it will be this one.

- Summarise the project or state its scope.

- Go beyond the **promise** sentence

Next 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.

Examples

Elevator Pitch *** **

Also known as "Global sales pitch"; makes the Importance Proposition

- **Promise** Sentence should have 3 parts:-

    1. What the project aims to achieve, in 'big picture' terms (too vague for insiders).
    2. What you actually expect to achieve (too detailed for outsiders).
    3. A reference to your achievements using similar methods, to show you are competent.

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The aim of the project is to enable improvements in training social workers by analysing the role of writing in social work practice using an integrated ethnographic and linguistic methodology we have developed.

Example Elevator pitch . . .

- **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?

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Social care costs 27 billion pounds annually in the UK and problems arising from errors in writing increase the risk of harm to service users.

Another EG

- Standard Structure: Key sentences as Introduction and Skeleton

- Variations

- ESRC Aims and Research Questions

- EPSRC Guidance

- Suggested Structure for EPSRC

3. Methods - five sections - describes the Project - Write it First

- **Project** Describe the project as a whole.

- **Implementation / Sub-project section x 3** Each describes a sub-project and shows that it solves the corresponding **problem**.

- **'Next'** Say what will happen after the project (impact?). Then add detail.

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4. Track record (required by MRC, BBSRC, EPSRC, NERC); create your own key sentences - Write it anytime after the Methods

Standard Structure *** **

2. Background - four sections - sells the project - Write it after the Methods.

   - **Importance** section explains what makes the project important.

   - **Problem** section x 3, each explains one of the problems/aims/research questions.

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Standard Structure *** **

1. Introduction - All the Key Sentences - Write it Last.

   - **Problem** key sentences can be research questions, aims or hypotheses.

   - **Implementation/sub-project** (and **Project** and **Concluding** key sentences) can be objectives.

2. Background - four sections - sells the project - Write it after the Methods.

   - **Importance** section explains what makes the project important.

   - **Problem** section x 3, each explains one of the problems/aims/research questions.

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1. Moving sub-components around
   - e.g. BBSRC require you to introduce the 'Research Plan and Methodology' with the Overall Aim & Specific Objectives. Can do this by having separate introductions for the Background & Methods sections. Or by double-naming the introduction, see below

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2. Using composite titles to avoid repetition
   - e.g. ESRC ask both for aims and for research questions: call each aim a research question.
   - EPSRC ask for 4 sections covering same topic 'Background', 'National Importance', 'Academic Impact' and 'Research Hypotheses & Objectives' solution here
   - BBSRC problem (above) can be solved by writing the Aims and objectives as subsections of the introduction.

- ESRC guidance suggests separate subsections for aims and research questions:-
  - The introduction should set the aims and objectives of the study in context. It should briefly sketch ………
  - The detailed research questions to be addressed should be clearly stated.
- It is dangerous to give the impression that research questions and aims refer to different goals.
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  - "We have three research aims which are expressed in our three research questions".

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  - "We have three research aims which are expressed in our three research questions".

- From that point on, do not switch: pick one of the terms and use it consistently.

Previous Track Record (up to 2 sides)

Description of proposed research and its context (6 sides)

- Background
  - Introduce topic and explain academic and industrial context
  - Demonstrate understanding of related work
- National importance
  - Contribution to other disciplines, economy & society.
  - Long term effects; relation to national strategic needs.
  - Fit with UK research & EPSRC's portfolio, research areas & strategy.
- Academic Impact
  - Describe academic impact
  - Explain collaborations; justify Visiting Researchers
- Research Hypothesis and Objectives
  - Set out your research idea or hypothesis
  - Explain why the proposed project is novel and timely
  - Identify the overall aims of the project, and the measurable objectives
- Programme and Methodology
  - Detail and justify research methodology
  - Describe the work programme & milestones for each member of the team,
  - Explain how the project will be managed.

Composite Titles to Comply with EPSRC Guidance *** **

1. Track Record
   - If you don't need 2 pages for your track record, put pilot data in the track record section.
2. Background (5 sections)

   i. Aim, Research Hypothesis and Objectives. This is a standard introduction that uses all the key sentences in order.
   ii. National Importance and Academic Impact section. This and everything that follows is the same as the standard structure. It uses the **Importance** Sentence followed by details that cover the topics specified by EPSRC.
   iii. -v. **Problem** sections as for standard structure

2. Programme and Methodology. (5 sections)

   i. **Project** sentence & subsection;
   ii. -iv. **Implementation sub-projects** 1-3

   v. '**Next**' section
      - Must include milestones and explain how the project will be managed.

Pair an Aim (Problem Sentence) with and Objective (Implementation Sentence)

- We need to know X because Y
- We will do Z and it will tell us X

Example

- We need to know the institutional writing demands of contemporary social work.
- We will analyse texts and explore how writing is managed alongside other commitments to characterise the institutional writing demands of contemporary social work.

Can you rewrite it as a Aim and an Objective?

Why is the first sentence important?

Why is the first sentence important?

- It has to be good enough to want to read your application

- 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?

Why is the first sentence important?

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- A plausible and attractive promise
    - What are the elements?

Promise Sentence Exercise ^{***} ^{**}

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1. A project that is likely to advance an important area of knowledge.
2. A project that is likely to be successful.
3. Evidence that you are competent to carry out the project.

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   - A project that is likely to be successful.
3. A reference your achievements using similar methods.
   - Evidence that you are competent to carry out the project.

The Exercise *** **

1. Interview your neighbour (3 mins)

2. Swap roles and interview again (3 mins)

3. Write a promise sentence for your neighbour's project (2 mins)

4. Write a Sentence for your own Project (2 mins)

5. Optimise and discuss.

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The information you need to gather in your interview is:-

1. What the project will achieve, in 'big picture' terms.
2. How it will achieve it (a more specific and detailed statement of the goal).
3. An example of your achievements using that approach.

eg The aim of the project is to enable improvements in training social workers by analysing the role of writing in social work practice using an integrated ethnographic and linguistic methodology we have developed.

How the Structure Works *** **

(**Key Sentence Names** are **Bold Font**)

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1. Introduction (summarises whole case for support using all key sentences)

- Promise, Importance, Problem$_{1-3}$, Project, Implementation$_{1-3}$ & 'Next'

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2. Background (Literature review=> **Promise** is Important; Solving **problems** is criterion for success)

- **Importance**: Sells promise => *IMPORTANCE PROPOSITION*
- **Problem$_1$**: Explains **Problem$_1$**
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- **Problem$_3$**: Explains **Problem$_3$**

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3. Methods / Research Programme (Project is value for money & will be successful)

- **Project**: Introduces the project.
- **Implementation**$_1$: How sub-project 1 will solve **Problem**$_1$
- **Implementation**$_2$: How sub-project 2 will solve **Problem**$_2$
- **Implementation**$_3$: How sub-project 3 will solve **Problem**$_3$
    - Mention resources used in research => *VALUE for MONEY PROPOSITION*
    - Explains how Project solves **Problems** => *SUCCESS PROPOSITION*
- **Next**: Says what happens after the project.
    - Expectations depend on funder & on importance proposition.

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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 each and to explain its importance.
4. Initiate the costing process & institutional approvals in parallel with the writing.
5. Draft your Key sentences in this order:-
    i. **Implementation** sentences.
    ii. **Problem** sentences.
    iii. **Project** and '**Next**' Sentences
    iv. **Importance** sentence.
    v. **Promise** sentence

    If you need a lay summary, begin working to prepare and test it.
6. Draft 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.

Examples ***

- Key Sentences 1-5 (Background)
- Key Sentences 6-10 (Project)
- Aims and Objectives
- Elevator Pitch
- Tag Phrases

Example Key Sentences

Key Sentences 1-5 Give the background and context

- 1 **Promise** The project aims to enable improvements in training social workers by analysing the role of writing in social work practice using an integrated ethnographic and linguistic methodology we have developed.
- 2 **Importance** Social care costs 27 billion pounds annually and problems arising from errors in writing increase the risk of harm to service users.
- 3 **Problem$_1$** We need to know the writing practices of professional social workers.
- 4 **Problem$_2$** We need to know the institutional writing demands of contemporary social work.
- 5 **Problem$_3$** We need to understand how writing practices shape professional social work.

The Key Sentence Technique

Problem Sentences

Key Sentences 6-10 describe the project

- **Project** Our methodology integrates ethnographic description, discourse analysis and tracking the production of texts.
- **Implementation$_1$** We will carry out an ethnographic study, in order to characterise the writing practices of professional social workers
- **Implementation$_2$** We will analyse texts and explore how writing is managed alongside other commitments to characterise the institutional writing demands of contemporary social work.
- **Implementation$_3$** We will use discourse analysis and track texts relating to specific cases to understand how writing practices shape professional social work.
- **'Next'** We will develop effective writing practices that will improve training and practice of social work.

The Key Sentence Technique

Implementation sentence Explanation

Project & 'Next' Sentence Explanation

Example Aims and Objectives

- Our project has three aims, which are expressed as the research questions we seek to answer:-

1. What are the writing practices of professional social workers?
2. What are the institutional writing demands of contemporary social work?
3. How do writing practices shape the nature of professional social work?

- Our project will answer the three research questions by pursuing the following three objectives:-

1. We will carry out an ethnographic study, in order to characterise the writing practices of professional social workers
2. We will analyse and quantify texts and explore how writing is being managed alongside other commitments in order to characterise the institutional writing demands of contemporary social work.
3. We will use discourse analysis and track the trajectories of texts relating to specific cases in order to understand how writing practices shape professional social work.

Aims and Objectives

Aim, Objectives, WPs *** **

The aim of the project is to enable improvements in training social workers by analysing the role of writing in social work practice using an integrated ethnographic and linguistic methodology we have developed. It has three objectives, which are to answer the following research questions:-

1. What are the writing practices of professional social workers?
2. What are the institutional writing demands of contemporary social work?
3. How do writing practices shape the nature of professional social work?

- The project has three work packages that will answer the three research questions:-

1. We will carry out an ethnographic study, in order to characterise the writing practices of professional social workers
2. We will analyse and quantify texts and explore how writing is being managed alongside other commitments in order to characterise the institutional writing demands of contemporary social work.
3. We will use discourse analysis and track the trajectories of texts relating to specific cases in order to understand how writing practices shape professional social work.

Better not to refer to a work-package by its number - everybody has a WP-1. Writing Guidelines

Aims and Objectives

Example Elevator pitch

Promise

- The central aim of the project is to enable improvements in training and practice of social work by analysing the role of writing in social work practice using an integrated ethnographc and linguistic methodolody.

Importance

- Social care costs 27 billion pounds annually in the UK and problems arising from errors in writing increase the risk of harm to service users.
- Check for Tag Phrases.

Elevator Pitch

The Importance Proposition

(Definition)

- Our three aims are to answer the following three research questions:-
    1. What are the writing practices of professional social workers?
    2. What are the institutional writing demands of contemporary social work?
    3. How do writing demands and practices shape professional social work?
- Our project will answer the three research questions by pursuing the following three objectives:-
    1. We will carry out an ethnographic study, in order to characterise the writing practices of professional social workers.
    2. We will analyse and quantify texts and explore how writing is being managed alongside other commitments in order to characterise the institutional writing demands of contemporary social work.
    3. We will use discourse analysis and track the trajectories of texts relating to specific cases in order to understand how writing demands and practices shape professional social work.