Using AI to create texts for open science and research data management

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Use of AI in open science support at the University of Ljubljana (Slovenia)

- Moodle course Introduction to Managing Research Data According to the Principles of Open Science
  - Preparing texts for the Slovenian version
  - Translation of texts from Slovenian into English (refining the translation with InstaText)

- Goals:
  - Consistency of terminology
  - Time efficiency (quick information retrieval, text composition, and translations)

Moodle courses: Introduction to Managing Research Data According to the Principles of Open Science

In Slovenian

In English

Clearly define the role of the AI

- **Good practice:** assign a **professional role** to the AI
- **Example prompt**

  Act as a Research Data Management officer at a European university, familiar with FAIR principles, Horizon Europe requirements, and GDPR.
- **Why it works**
  - Aligns tone and terminology
  - Reduces generic or commercial language
- **Bad example prompt**

  Write a text about open science.

Specify the institutional and legal context

- Especially important for **open science and research data management**
- Include:
  - Funding context (national research agency, international funders …)
  - Legal frameworks (national research legislation, personal data protection legislation)
  - Institutional policies (university, repository)
- **Good practice prompt**

  Base the explanation on European open science policies and common practices at public research universities.
- **Tip**
  - Do not assume AI knows *your* institutional specifics.

Define the target audience precisely

- Different audiences need **different depth and tone**
- Examples:
  - Doctoral students (introductory, practical)
  - Senior researchers (policy-oriented)
  - Administrative staff (compliance-focused)
- **Good practice prompt**

  Write for doctoral students with no prior knowledge of research data management.
- **Common mistake**

  “for researchers” (too vague, leading to mixed results)

Be explicit about scope and limits

- Avoid **over- or under-production**
- Specify:
  - Length (e.g., 150–200 words)
  - Level of detail
  - What to exclude
- **Example prompt**

  Write a concise introduction (max. 150 words). Do not include legal citations or funding acronyms.
- **Why important**
  - Prevents excesively long, unfocused texts
  - Ensures content is suitable for a Moodle course

Require correct terminology (FAIR, RDM, OS)

- In open science, **accurate terminology is essential**
- **Good practice prompt**

  Use standard terminology: FAIR principles, metadata, trustworthy repository, anonymisation vs pseudonymisation.
- **Advanced tip**
  - Ask AI to **flag uncertain terms**
  - If a term may be ambiguous, add a brief clarification

Ask for structured output

- Very useful for **Moodle courses and web publishing**
- Examples:
  - Bullet points
  - Headings
  - Tables
  - Short definitions
- **Example prompt**

  Structure the text using short headings and bullet points suitable for a Moodle lesson.

Iterative refinement

- **Realistic workflow**
  - First draft (broad)
  - Terminology and policy alignment
  - Simplification for researchers
  - English style polishing
- **Example prompt**

  Simplify the text while preserving regulatory accuracy.
- **Key message:**
  - Iteration is not a failure – it is best practice

Weak vs strong prompt (open science topic)

- **Weak prompt**

  Explain FAIR data.

- **Strong prompt**

  Explain the FAIR principles for doctoral students in social sciences.
  Use examples relevant to interview-based research.
  Keep the text under 200 words and avoid technical jargon.

Ethical and quality considerations

Especially important in **institutional contexts**:

- AI-generated text must be:
  - Reviewed by a human
  - Aligned with official policies
- **Good practice prompt**
  - Avoid sensitive personal data in prompts

AI assisted – final responsibility remains with the institution

Lessons learned

- **Best results** when:
  - Context is detailed
  - Instructions are precise, rather than brief
  - Output is reviewed and adapted

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Let us try together

Demo 1: Introductory text for a Moodle lesson (RDM basics)

PROMPT

Act as a research data management support officer at a European public university.

Write an introductory text for a Moodle lesson entitled "Introduction to Research Data Management".

The target audience are doctoral students at the beginning of their research career.

Explain what research data are and why proper data management is important in the context of open science.

Keep the text under 200 words, use clear language, and avoid legal citations.

Demo 2: Text for Moodle section: “Sensitive data and data sharing”

PROMPT:

Write a short explanatory text for a Moodle course section on sensitive research data.

Explain what makes data sensitive (e.g., personal data, health data, interview data).

Clarify that not all research data can be openly shared.

Mention anonymisation and controlled access as typical solutions, without going into legal detail.

Target audience: researchers and doctoral students.

Length: approx. 150 words.

Demo 3: Text for a webpage: Open science (general audience)

PROMPT:

Write a clear and concise text for a university webpage explaining open science.

Target audience: researchers and the general academic community.

Explain the core principles of open science and its benefits for research quality and society.

Keep the text neutral, informative, and institutionally appropriate.

Length: max. 250 words.

Simplification request – typical second iteration

- **Follow-up prompt**
  - Simplify the previous text for researchers.
  - Reduce complexity while preserving accuracy.
  - Avoid policy-heavy language and long sentences.

Terminology check (advanced good practice)

Example prompt

Review the text and check whether the terminology related to research data management and open science is used consistently and correctly.

If a term could be ambiguous, suggest a clearer alternative.

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Attribution:
This presentation was drafted with Copilot AI and the English was refined using InstaText

PROMPT 1

We used artificial intelligence to prepare texts for the Moodle course “Introduction to Managing Research Data According to the Principles of Open Science”.

I need to prepare a PPTX presentation in English.

The aim is to present recommendations for formulating highly effective instructions for artificial intelligence when generating texts, with a particular focus on open science and research data management.

Please prepare a proposal for the presentation, using examples of good practice available online.

PROMPT 2

Add concrete examples of prompts from our Moodle course.

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Thank you for your attention!

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