Data Management Expert Guide

Introduction, Training package
Chapters 5 and 6

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TRAINING

EVENT CALENDAR   TRAINING RESOURCES   ABOUT

CESSDA
Training

CESSDA Training

It is part of CESSDA's mission to facilitate teaching and learning in the social sciences. CESSDA has a Training Working Group that is responsible for supporting continuous learning and training of its Service Provider staff and the social science user community. The Training Group maintains the information on this training website.

We focus on training for

- data producers,
- data users,
- data professionals and CESSDA Service Provider staff.

You can find training, advice and educational resources on:

- discovering and using data,
- managing research data,
- preserving data and using CESSDA's tools and services.

Featured Resource

Data Management Expert Guide

Put social scientists like yourself at the heart of making their research data findable, understandable, sustainably accessible and reusable

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DMEG

www.cessda.eu/DMEG
www.cessda.eu/DMEG/TTT

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DMEG Data Management
Expert Guide

Train-the-Trainers Package

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CESSDA Training Working Group (2017). *CESSDA Data Management Expert Guide.* Bergen, Norway: CESSDA ERIC. Retrieved from https://www.cessda.eu/DMEG

How the module can be used

◇ The module is open and freely available anywhere anytime.

◇ Self-study for researchers (15 - 20 hours of content)

◇ Basis for interactive blended training by trainers or data stewards in (social sciences) research institutes to provide workshops on data management

◇ Train-the-trainer package

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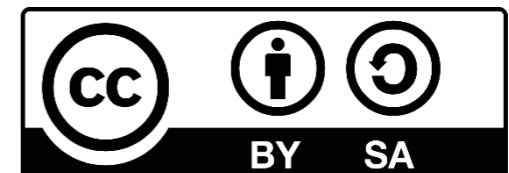
Recurring elements in each chapter

- Expert tips

- European diversity

- Qualitative vs. Quantitative

- Adapt your DMP

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Recurring elements – EXPERT TIPS

Expert tip

How FAIR are your data?
Want to know how FAIR your data are? Have a look at the checklist by Jones and Grootveld (2017).

Expert tips

Any researcher who wishes to become proficient at doing qualitative analysis must learn to code well and easily. The excellence of the research rests in large part on the excellence of the coding | Strauss (1987).

\+   Tip 1: Document the meaning of codes

\+   Tip 2: Prevent coder variance

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Recurring elements – EU diversity

Data management requirements in Europe

There are many different local, national and international DMP templates and tools that you can use to create a DMP for your own research project. At this stage, it might be good for you to check for templates or tools that best fit your own specific situation. You can ask at your university or department whether they have their own DMP template. Or maybe your research funder requires a DMP in a specific format.

In the accordion below we sum up European diversity in funder requirements on Data Management Planning and link to DMP templates if they are available.

| FINLAND | **NETHERLANDS** | NORWAY | SWITZERLAND | UK |

Storage of raw research data for at least 10 years

For research conducted in the Netherlands, the raw research data are required to be stored for at least ten years. Additionally, this data must also be made available to other academic practitioners upon request (unless legal provisions dictate otherwise). Researchers who receive a Netherlands Organisation for Scientific Research (NWO) grant are required to disclose data even after ten years.

It is therefore important for researchers working on research projects in the Netherlands or collaborative projects which include research within the Netherlands to consider this in the Data Management Plan (DMP) and their project preparations, so as to ensure that they have a system in place to store the research data for at least ten years.

More information can be found in the Netherlands Code of Conduct for Academic Practice (Association of Universities in the Netherlands, 2014) and Research Data Netherlands (n.d.) can provide further guidance and advice on this requirement.

- + EU
- + Belgium
- + Czech Republic
- + Finland
- + Germany
- + Netherlands
- + Norway
- + Slovenia
- + Sweden
- + Switzerland
- + UK

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Recurring elements

◇ Qualitative vs. Quantitative data

Minimising errors in survey data entry

In the accordion below a summary of recommendations on minimising errors in survey data entry is given (UK Data Service, 2017a; ICPSR, 2012; Groves et al., 2004).

+ Check the completeness of records

+ Reduce burden at manual data entry

+ Minimise the number of steps

+ Conduct data entry twice

+ Perform in-depth checks for selected records

+ Perform logical and consistency checks

+ Automate checks whenever possible

Considerations in making high-quality transcriptions of qualitative data

The most common formats of qualitative data are written texts, interview data and focus group discussion data. In most cases, interview and discussion data are first digitally recorded and then transcribed. Transcription is a translation between forms of qualitative data, most commonly a conversion of audio or video recordings into text. If you intend to share your data with other researchers, you should prepare a full transcription of your recordings (Bucholtz, 2000).

There are several basic rules and steps in the process of making and checking a high-quality transcript from audio/video (Kuckartz, 2014):

Designing qualitative data files

Qualitative data files emerge from many different types of research material. Such data files are texts (transcribed interviews or focus group sessions, various types of written texts, such as newspaper and magazine material, diaries etc.) or photographs, audio files (recordings of speech) or video files. Unlike quantitative data, qualitative data are not presented in form of variables, numbers, data matrices etc. Alike, they must be organized and stored in an exact precise manner so they are easily managed and ready for use.

Usually, individual data collection events will be structured into individual files, e.g. one interview transcript, one image, one audio recording each time makes a single file. These single files are then organised into folders of similar files. Sometimes, qualitative information may also be organised into matrix structures, e.g. textual extracts from newspaper articles or diaries may be placed into a rectangular matrix, whereby further metadata and coding can be added alongside each entry

Designing a qualitative data structure comes down to:

- Thinking of ways to categorise data (see 'Qualitative coding');
- Developing a file naming strategy (see 'File naming and folder structure');
- Designing a comprehensive folder structure (see 'File naming and folder structure').

Designing quantitative data files

In quantitative research, the content of the data often results from numerical coding in standardised questionnaires (see 'Quantitative coding'). In addition, full-text answers or textual codes can be recorded into specific types of variables in quantitative data files. Quantitative researchers may also store other material, i.e. administrative data, data from social media or various texts. However in this chapter, when we speak about quantitative data, we usually mean survey data.

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Recurring elements - DMP

Adapt your Data Management Plan

A list of Data Management Questions based on the Expert Tour Guide on Data Management

This CESSDA list of Data Management Questions (2017) is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

The CESSDA Expert Tour Guide on Data Management is available at https://www.cessda.eu/DMGuide

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Overview

Title of the project

Date of this plan

Description of the project
- What is the nature of the project?
- What is the research question?
- What is the project time line?

Origin of Data
- What kind of data will be used during the project?
- If you are reusing existing data: What is the scope, volume and format? How are different data sources integrated?
- If you are collecting new data can you clarify why this is necessary?

Principal researchers
- Who are the main researchers involved?
- What are their contact details?

Collaborating researchers (if applicable)
- What are their contact details and their roles in the project?

Funder (if applicable)
- If funding is granted, what is the reference number of the funding granted?

Data producer
- Which organisation has the administrative responsibility for the data?

Project data contact
- Who can be contacted about the project after it has finished?

Data owner(s)
- Which organisation(s) own(s) the data?
- If several organisations are involved, which organisation owns what data?

Roles
- Who is responsible for updating the DMP and making sure that it's followed?
- Do project participants have any specific roles?
- What is the project time line?

Costs
- Are there costs you need to consider to buy specific software or hardware?
- Are there costs you need to consider for storage and backup?
- Are potential expenses for (preparing the data for) archiving covered?

Adapt your DMP: Part 1

« Previous Next »

Search this guide [   ] **Search**

The Data Management Plan (DMP) is an important tool to structure the research data management of your project. After working on each chapter you should be able to answer part of the questions which make up a DMP.

This is the first of six 'Adapt your DMP' sections in this tour guide. When you have finished the chapter on data management planning, you can start filling in the 'Overview of your research project' section. Below you can see what elements and corresponding questions are generally included in that section. You can select appropriate questions and answer them to adapt your own DMP.

For easy reference, we have put together a list of DMP-questions for all chapters in this tour guide. You can view and download it (CESSDA, 2017) and keep it as a reference while you are studying the contents of this guide.

+ Title of the project

+ Date and version of this plan

+ Description of the project

+ Origin of the data

+ Principal and collaborating researchers

+ Funder (if applicable)

+ Data producer

+ Project data contact

+ Data owner(s)

+ Roles

+ Costs

Train-the-Trainers package

◈ Forms an addition to the CESSDA Data Management Expert Guide.

◈ This package contains different materials that trainers can use in developing and giving Research Data Management trainings for (social science) researchers.

◈ Workshop Outlines

◈ [Exercises](#)

◈ Presentations

◈ Documents and Handouts

◈ Images

5. Protect

- Focuses on key legal and ethical considerations in creating shareable data.

Main take-aways

◈ Be aware of your <u>legal and ethical obligations</u> towards participants and be informed of the different legal requirements of EU Member States;

◈ Understand how protecting your data properly <u>protects you</u> against violating laws and promises made to participants;

◈ Understand the impact of <u>the General Data Protection Regulation</u> (<u>GDPR</u>; European Union, 2016a);

◈ Understand how a <u>combination of informed consent, anonymisation and access controls</u> allows you to create shareable personal data;

◈ Be able to define what <u>elements</u> should be integrated into a consent form;

◈ Be able to apply <u>anonymisation techniques</u> to your data;

◈ Be able to answer the <u>DMP questions</u> which are listed at the end of this chapter and adapt your own DMP.

6. Archive & Publish

◇ Focuses on guiding users in making their informed decision on where to archive and publish their data in such a way that others can properly access, understand, use and cite them.

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Main take-aways

- Understand the difference between <u>data archiving</u> and <u>data publishing</u>;

- Be aware of the <u>benefits</u> of data publishing;

- Be able to differentiate between different <u>data publication services</u> (data journal, self-archiving, a data repository);

- Be able to <u>select a data repository</u> which fits your research data's needs;

- Be aware of <u>ways to promote</u> your research data publication;

- Be able to answer the [DMP questions](#) which are listed at the end of this chapter and adapt your own DMP.

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Thank you for your attention!

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