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## Plan Overview

*A Data Management Plan created using DMPTuuli*

**Title:** Kriisit, korkeakoulujohtaminen ja -työ: miten korkeakoulut voivat toimia paremmin kriiseissä?

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**Project Administrator:** Marc Perkins, Taina Saarinen, Taru Siekinen

**Affiliation:** University of Jyväskylä

**Funder:** Työsuojelurahasto

**Template:** General Finnish DMP template

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### Project abstract:

The project investigates how higher education institutions, especially Finnish institutions, can function better in crises. The aim of the project is to facilitate the development of crisis leadership, including preparation for crises, management of crises, and recovery from crises, at universities, universities of applied sciences, and other similar workplaces. One goal of this crisis leadership development is to ensure that leadership and management actions during a crisis support the work done, and well-being of those doing the work, in higher education institutions during crises.

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# Kriisit, korkeakoulujohtaminen ja -työ: miten korkeakoulut voivat toimia paremmin kriiseissä?

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## 1. General description of the data

**1.1 What kinds of data is your research based on? What data will be collected, produced or reused? What file formats will the data be in? Additionally, give a rough estimate of the size of the data produced/collected.**

There will be four primary types of data used in this project: panel discussion, participant reflections, survey, and existing research data.

Panel discussions by participants in this project

- Collected as: .mp4 and .mp3 video and audio recordings of online panel discussions.
- Converted to: .txt and .docx files that contain text transcripts of the panel discussions
- Analyzed as: Atlas.ti files (.atlproj23)
- Backed up as: Atlas.ti project bundle export files (.atlproj23)
- Archived as: QDPX files for analysis work; .txt or .docx for raw transcripts.
- Required software: Atlas.ti to view analysis files, or other qualitative data analysis packages capable of reading QDPX files to read archived data. Word or other software capable of reading .txt or .docx files for raw transcripts.
- Anticipated data space storage needs: Less than 25gb

Participant reflections by participants in this project

- Collected as: Webropol and TaskCards online survey system data
- Exported to: .xlsx or .txt files
- Analyzed as: .xlsx and .docx files
- Backed up as: .csv and .docx files
- Archived as: .csv and .docx files
- Required software: Excel or other software capable of reading .xlsx or .csv files; Word or other software capable of reading .docx or .txt files
- Anticipated data space storage needs: Less than 1g

Survey responses by participants in this project

- Collected as: Webropol online survey system data
- Exported to: .xlsx files
- Analyzed as: .xlsx files
- Backed up as: .csv files
- Archived as: .csv files
- Required software: Excel or other software capable of reading .xlsx or .csv files
- Anticipated data space storage needs: Less than 1g

Existing research data

- Collected as: A wide variety of different formats, including online video/audio recordings, in-person audio recordings, online survey systems, online webpages, documents provided by participants, and more. Primary files worked with will be analysis summaries and qualitative data coding done by the researchers during analysis of the projects.
- Analyzed in this project as: Notes contained in .docx or .gdoc files (no personal data to be stored in .gdoc files).
- Backed up in this project as: .docx files
- Archived in this project as: .docx files
- Required software: Word or other software capable of reading .docx files
- Anticipated data space storage needs: Less than 1g

## 1.2 How will the consistency and quality of data be controlled?

Across all datasets:

- A common filenames system will be implemented, with the date of original file production (e.g., date of audio recording, date of data export from survey system) integrated into the filename. Files that are revised will have version numbers attached to the file name.
- A common research journal will be created, with all major work done to datafiles logged in it.
- All researchers have completed the JYU data management course or equivalent training.
- All researchers meet regularly to decide on details of data collection and discuss/reflect on data collection done to date.
- Researchers write their field observations immediately after panel meetings and meet regularly to compare their field observations.

#### Panel discussions by participants in this project

- Panels may be run by different individuals, so a common set of prompts will be created before the panels and a common set of instructions will be shared with all panel organizers.
- Recorded as high-quality audio and video directly from the online meeting platform
- Transcribed offline using the largest model available for use in Whisper, a free, open-source, offline-capable large language model transcription system, OR transcribed by a paid transcription service.
- Transcription manually verified by having a researcher listen to the entire recording after the prior step, with the transcriber adding in indications of uncertainty where present. If areas with uncertainty in the transcript are identified as important for analysis later, they will be listened to by another researcher.
- All original audio and transcription files will be stored in NextCloud with dates, and work done on them will be logged in the research journal.
- Analysis work will be regularly exported in open formats to NextCloud.

#### Participant reflections by participants in this project

- Data will be downloaded from the web platforms (Webropol and TaskCards) regularly, exported into open forms and stored, with date-coded version-tracking file names, in NextCloud.
- Data will be imported from these exports into analysis software, where its source will be clearly noted and logs of major work kept in the research journal.

#### Survey responses by participants in this project

- Survey data will be exported regularly during the survey's open time period, as well as at the end of the survey collection timeperiod. Exports will be stored, with dated names, in NextCloud

#### Existing research data

- Researchers will log what analysis work they are doing in the common research journal, indicating the type and source of data they are using.
- Common documents will be created to facilitate sharing and integration of the existing research data findings, which will include notes of what was analyzed to create the findings.

## 2. Ethical and legal compliance

### 2.1 What legal issues are related to your data management? (For example, GDPR and other legislation affecting data processing.)

All work follows GDPR regulatory guidelines and Finnish research ethical principles, with participants fully informed of data privacy, data use, and project goals before obtaining voluntary consent to participate. JYU templates were used to create a research notification, privacy notice, and consent form, all of which were created in consultation with Open Science Center staff at JYU.

Personal data collection will be minimized in the project, and all data will be analyzed with as much personal data removed as possible; any personal data that is required during analysis will be pseudonymized before analysis. See the privacy notice and research notification for more information.

### 2.2 How will you manage the rights of the data you use, produce and share?

We are planning on sharing reusable, anonymized versions of all core data (primarily the panel transcripts and survey data) in an online data repository at the end of the project, if possible. We have informed all participants of this in our privacy notice.

## 3. Documentation and metadata

### 3.1 How will you document your data in order to make it findable, accessible, interoperable and re-usable for you and others? What kind of metadata standards, README files or other documentation will you use to help others to understand and use your data?

The project-level discovery metadata of the new research data produced during the project will be filed and maintained in the Converis research information system of the University of Jyväskylä. This metadata will be published at an appropriate point and made permanently available in the University's JYX repository (see 5.1). While much of the data obtained in this project will include some personal data, and thus not be publicly archivable, all data types obtained will be described in metadata to ensure they are findable. Sub-projects will be created in Converis, and permanently published in JYX, for all datasets that will be made available permanently (e.g., anonymized survey responses).

All data to be shared publicly in a data repository at the end of the project (primarily interview transcripts and survey results) will have documentation

created for it to allow for secondary users to understand the what the data are along with why, where, how, and when the data were obtained. Data will be stored in a logical folder structure, with each folder having a readme file detailing the contents of that folder. Metadata for each data file, including information on when, where, and how the data were collected, will either be stored in a .txt file associated with the particular file or in the readme file in the directory it is associated with. The metadata standards of the data repository chosen to share the data will be followed, and Qvain (<https://qvain.fairdata.fi/>) will be used to facilitate metadata creation and sharing.

## **4. Storage and backup during the research project**

### **4.1 Where will your data be stored, and how will the data be backed up?**

All original data will be stored on password protected computers, with JYU's secure self-hosted online cloud service NextCloud being used for data organization, data sharing between researchers, and data backup (NextCloud is backed up daily by JYU staff and requires 2FA-verified logins to access). Microsoft and Google cloud services (e.g., Office 365 or GoogleDrive) will be used for project coordination purposes; any core data stored on these services will be backed up as either PDFs, .xlsx, .pptx, or .docx files in NextCloud (and personal data will not be stored in these cloud services).

### **4.2 Who will be responsible for controlling access to your data, and how will secured access be controlled?**

Marc Perkins, project researcher at the Finnish Institute for Educational Research, will be primarily responsible for data access and control; Taina Saarinen will be secondarily responsible for this. All data will be secured on password-protected computers and/or password-protected cloud services (e.g., NextCloud at JYU) shared only securely via password-requiring links.

## **5. Opening, publishing and archiving the data after the research project**

### **5.1 What part of the data can be made openly available or published? Where and when will the data, or its metadata, be made available?**

Once the project is complete, anonymized panel discussion transcripts and survey responses will be shared, if possible, in a publicly accessible data repository, along with metadata (described above). The particular repository has not been chosen yet. Both direct and indirect identifying information will be removed from all data that are shared, which means that survey data will be edited before sharing, the original audio and video recordings will certainly not be able to be shared, and transcripts may not be able to be shared (depending on whether transcripts can be fully anonymized).

All shared data will be licensed for reuse, most likely with a Creative Commons license BY-NC license (attribution required, no commercial use allowed).

The basic project-level discovery metadata of the dataset(s) will be made openly available in the University's JYX repository with a DOI for permanent findability and accessibility whenever the metadata are sufficiently complete to be published. This will hopefully take place before the end of the project.

### **5.2 Where will data with long-term value be preserved, and for how long?**

Data containing personal information, such as original interview recordings, original survey responses, original participant reflections, and other items will be destroyed at the end of the project.

Anonymized panel discussion transcripts and survey responses will be archived permanently for potential re-use at a public data repository to be decided on later.

Other data and analysis files will be archived on NextCloud at JYU for a reasonable verification period, likely 5 years from the completion of the project.

## **6. Data management responsibilities and resources**

### **6.1 Who (for example role, position, and institution) will be responsible for data management?**

Marc Perkins, project researcher, Finnish Institute for Educational Research, University of Jyväskylä, will be primarily responsible for data management and stewardship, coordination of data-related work, and review of the DMP, with Taina Saarinen, director Finnish Institute for Educational Research, University of Jyväskylä, supervising and backing up if Marc Perkins is unable to complete these duties.

The data management plan will be updated at least twice a year during the project.

**6.2 What resources will be required for your data management procedures to ensure that the data can be opened and preserved according to FAIR principles (Findable, Accessible, Interoperable, Re-usable)?**

The University of Jyväskylä provides the required resources, such as NextCloud and Webropol. Funding for staff time to manage the data is provided by the Finnish Work Environment Fund and the Finnish Institute for Educational Research.

Planned Research Outputs

Interactive resource - "Report with recommendations for crisis leadership at Finnish higher education institutions"

A report containing an analysis of the project's data and core findings of the project, focusing especially on the status of, and recommendations for improving, crisis leadership at Finnish higher education institutions. A summary of background research and detailed project methods will also be included.

Interactive resource - "Research article on conceptual aspects crisis"

In addition to the report for the funder, other research outputs will be produced for the research audience

Interactive resource - "Blog text on crises in higher education"

Open access blog texts for academic and professional audiences

Journal - "Metadata / dataset publication"

Metadata describing all of the project's datasets will be published so that they are findable by other researchers, and as many datasets will be publicly published as possible (given the constraints of privacy and ethical requirements to remove all identifying / personal information). Publication platform is intended to be the University of Jyväskylä's JYX repository.

Planned research output details

Title	DOI	Type	Release date	Access level	Repository(ies)	File size	License	Metadata standard(s)	May contain sensitive data?	May contain PII?
Report with recommendations for crisis leadership ...		Interactive resource	2024-08-01	Open	None specified	10 MB	Creative Commons Attribution 4.0 International	None specified	No	No
Research article on conceptual aspects crisis		Interactive resource	2024-08-13	Open	None specified	5 MB	Creative Commons Attribution 4.0 International	None specified	No	No
Blog text on crises in higher education		Interactive resource	2024-07-13	Open	None specified		None specified	None specified	No	No
Metadata / dataset publication		Journal	2024-06-01	Open	None specified		None specified	None specified	No	No