From labourer to information service expert: FSD's journey in qualitative data archiving

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Abstract

This article explores the evolution of the Finnish Social Science Data Archive (FSD) in archiving qualitative research data. It highlights the initial challenges faced due to ethical concerns and methodological assumptions, and the gradual shift towards openness in qualitative research. The article discusses the influence of national and international policies, the role of ethical principles, and the impact of the open science movement in Finland. It also details the practical steps taken by FSD to facilitate data archiving qualitative data, including the development of data management guidelines and the use of specific technical tools. The article underscores the importance of providing detailed guidance for researchers and the observed growing acceptance of qualitative data archiving within the research community.[4]

Keywords

Qualitative data, data archiving, research data management, open science, anonymisation

Introduction

Analysing archived qualitative research data is much more common today than it was two to three decades ago. While several early research articles concentrated on ethical and methodological obstacles to qualitative data archiving (e.g., Mauthner, Parry and Backett-Milburn, 1998; Richardson and Codfrey, 2003), now the focus is on substantial content of the research. Archived qualitative data can for instance be reused in narrative analyses of homelessness (Burr et al., 2024) analysing African politics, governance and development (Kern and Multasilta, 2023) and even in social scientific approaches to climate change (Olson and Pinto da Silva, 2024).

FSD decided to archive qualitative data in 2003, fully aware that the prevailing methodological assumptions among qualitative researchers were not favourable to the idea of opening qualitative data for reuse. It should be noted that it was not until 2007 that the OECD Report on access to data from public funding (OECD, 2007), which significantly accelerated the discussion on larger data sharing in Finland, was released. Grandiose statements about the openness of science as a catalyst for economic efficiency and innovation were unlikely to convince researchers using qualitative data. For them, archiving was seen as an unethical practice that violated the principles of confidentiality with subjects.

FSD began the archiving process by locating and directly contacting the researchers who had collected qualitative data for their publications. Most stated that archiving would be impossible due to the confidentiality statements given to research subjects, which stipulated that the data could only be used for designated research. Fortunately, a few researchers indicated that archiving might be possible if research subjects were contacted to give consent or deny archiving. FSD was happy to assist researchers in reaching out to those subjects. The results of this effort were surprising for all parties involved: only four out of 169 research subjects refused permission to archive the data for further use. A discussion of this endeavour has already been published in *IASSIST Quarterly* (Kuula, 2011).

When FSD had collected some evidence of research participants' favourable views towards data openness, it became easier to have discussions with researchers who were against archiving qualitative data. In addition to personal contacts, FSD staff members participated in numerous seminars and scholarly events, giving presentations about archiving qualitative data. In personal conversations, several researchers claimed that the ethics of qualitative research were based on the idea of an intimate and confidential research relationship. This would be violated if the data were disclosed to others, even if they had been anonymised. Other problems expressed by the researchers were to do with data protection, consent formulation, and the implementation of anonymisation. Some researchers also doubted whether their archived data would be reused at all.

Discussions with researchers took place in a broader context. FSD received valuable advice from the UK Data Archive, where qualitative data pioneers like Louise Corti (e.g. 2006) and Libby Bishop (e.g. 2005) had already engaged in an ethical debate to defend data archiving. Concurrently in Finland, drafting of the first ethical principles for human research began, and FSD had a significant influence on their creation. The ethical principles for human research in Finland were published in 2009, at the same time when Finnish research funders largely started to recommend opening research data. One of the ethical principles then was, and still is, the openness of research data (Finnish National Board on Research Integrity TENK, 2019).

This led to a major change, because archiving qualitative data, in principle, was now more ethical than unethical. It became much easier for the archive to justify archiving qualitative data, as the ethical principles emphasised the importance of preserving qualitative data to, for example, reduce research pressure on small population groups. In addition to promoting openness in science, the importance of valuing research participants' contributions was also emphasised. FSD's re-contacting of 169 research participants of qualitative research projects confirmed it. "People had participated in the research because they had thought the subjects of the interviews were worth studying. Giving consent to archiving meant continuing to fulfil this wish" (Kuula, 2011, p. 15).

From the perspective of FSD's services, it is also important to recognise that not all qualitative data is sensitive or ethically challenging to use. However, we apply the same processing principles consistently across all deposited qualitative data. Archived data may contain information, e.g. about health or sexual orientation. Once anonymised, the content may still be sensitive, but with no disclosure risk in reuse.

Open science movement in Finland supports all kind of data openness

In addition to funder requirements and a change in ethical considerations, a notable movement for openness had emerged in Finland. The broader collaborative push for open science and research had already begun to become more relevant for opening, sharing, and archiving qualitative data. This development largely coincided with the growing global acceptance of the FAIR principles.

From 2014 to 2017, the initiatives for making research data discoverable were led by the Ministry of Education and Culture. These efforts resulted in the launch of the national data discovery portal and the digital long-term preservation solution, especially benefiting cultural heritage sector institutions, which in turn have lots of qualitative textual materials in their possession. They were very interested in making their collections more visible for research use. In 2018, the open science coordination was mandated by the Ministry as a research community-driven collaboration. The coordination role was assigned to the Federation of Finnish Learned Societies, which then organised various steering and working groups to draft policies and guidelines, advance openness in access to research publications, research data and methodologies, learning materials, and to facilitate an open research community. The key mission of this newly established Open Science Coordination was to promote openness as a fundamental value throughout the research community and its activities.

Regarding the shift in research culture shift toward greater openness in Finland, some of the outputs of the Open Science Coordination have been pivotal. The *Declarations for Open Science and Research 2020–2025 and 2025–2030*[5] have been signed by practically all higher education institutions and research-performing organisations, thereby committing to make openness a fundamental value and an integral part of researchers' daily work, with the intention of increasing the impact and quality of research outputs. By committing to the Declaration, these institutions endorse openness in their own strategies, demonstrate transparency about their commitment, and commit to actively participate in the national open science and research coordination activities. The Declaration is supported by more concrete policies, such as the *Policy for Open Access to Research Data and Methods*[6], and practical recommendations, which are narrower in scope. Most recently, the *Open Science and Research Reference Architecture*[7] was published. It provides an overview of the national target state for openness in research in 2030.

Over the past decade, FSD's experts have actively contributed to drafting and promoting these and other various recommendations for openness. In this environment, it is easier for new generations of researchers to adopt the mindset that even qualitative data can be archived and made available for reuse in an ethically sound and sustainable way.

Guidelines as a key factor

Despite their importance for the cultural shift, the principles of open science and research – and any declaration that opening data is an ethical practice – do not help researchers in their concrete work of archiving data. Noble principles are of little use if they are not directly beneficial or easy to implement during the research life cycle. 'Why open' needs to be paired with 'how to open'. To address this challenge, FSD had already in 2009 started to develop its openly accessible *Data Management Guidelines*[8] (see Figure 1). In the guidelines, FSD paid special attention to the starting point of data collection, since ethical practices that prevent data archiving are primarily defined by the original researchers during the data collection phase. Models for formulating informed consent,

including data archiving, were created for different types of interaction modes (interviews, focus group interviews) and for collecting thematic writings. The guidelines were also supplemented with sections on the transfer of copyright for photographs and other works. Since the implementation of the European Union law known as the General Data Protection Regulation (GDPR), this guidance has become even more important, regardless of whether the data to be collected are qualitative or quantitative.

FSD's data archiving processes are unified as far as possible for both types of data. The archive's internal handbook and public Data Management Guidelines are intended for both qualitative and quantitative research data management. The Guidelines have eleven sections and only two of them are targeted according to data types: processing the data files is separated for qualitative and quantitative data. The section on anonymisation includes separate guidelines for quantitative and qualitative data anonymisation, but the main parts are common to any type of data. These include minimisation and anonymisation principles, pivotal terms related to data protection, and the conceptual difference between anonymous and pseudonymous data.

The main sections and every subpart of the Data Management Guidelines have anchor links. These are crucial to FSD's customer service work. When a researcher contacts FSD and asks what to do to enable data archiving for an upcoming qualitative research project, the advice is very straightforward. We outline the most important steps: inform research participants about data archiving, organise data files, collect sufficient metadata about each data unit, and anonymise the dataset at the end of the project. For each step, we can provide a precise link that leads to detailed and practical 'how to' information. Not only does this approach make customer service easier, but also facilitates the research team's own data management. Ultimately, it results in correctly informed and processed qualitative data ready for archiving.

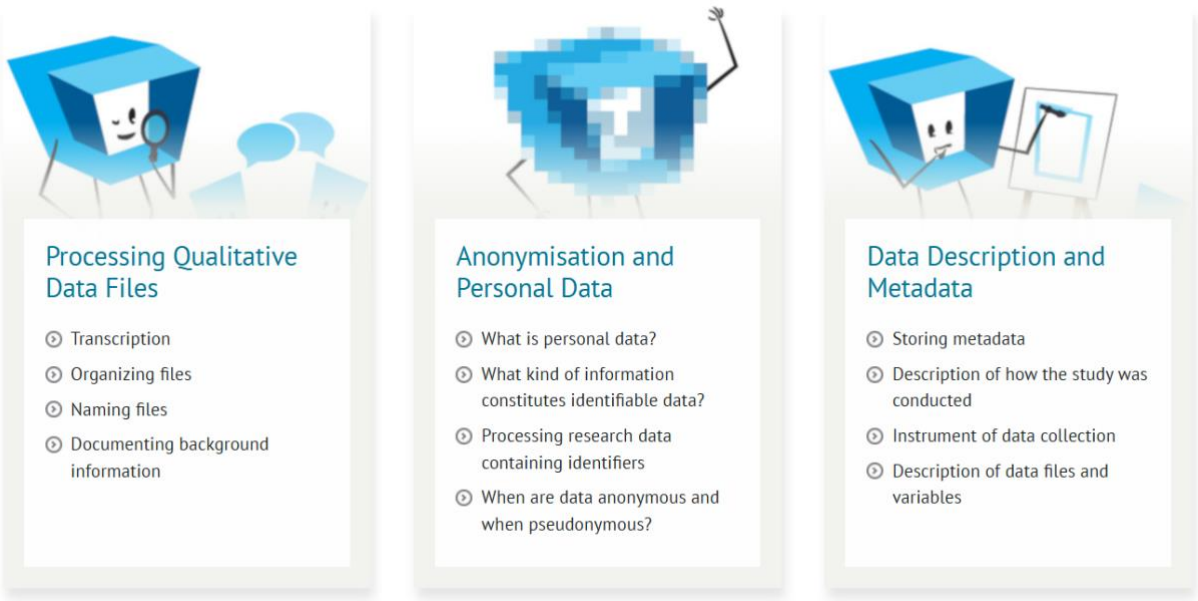

Figure 1 – Three example sections of the Data Management Guidelines.

Data acquisition and processing practices

Once the research data has been collected, the actual archiving process starts with the researcher contacting FSD. At this point, the contact is often made via email or by using FSD's 'Suggest data to be archived' web form. The form is a good way to get all the necessary information at once. On the form, the researcher is asked to provide information, for example, on how the research participants were informed about the data use and archiving, whether the data have been anonymised, and how anonymising has been done. If the information provided is not adequately detailed, FSD will request further clarification.

If the data, based on the information given by the author, meet the requirements set by FSD and GDPR, the next step in FSD's protocol is to sign an archiving agreement between the researcher and FSD. The archiving agreement, which also includes GDPR requirements on personal data processing, must always to be completed before depositing the data.

Depositing data to FSD is easy and secure through Aila Data Service, a dedicated portal for data deposit, discovery, and download. After signing the archiving agreement, FSD sends the data depositor a personal code to use for data transfer via Aila. Once FSD has received the data, they are briefly checked to be as expected, after which they are stored in the FSD's database to await processing. All the basic information about the data, the authors, and the archiving agreement is stored in the FSD database. At this point, the persistent DOI and URN identifiers for the data are already minted. FSD informs the authors about the identifiers so that they can include them in any forthcoming research publications based on the archived dataset. Persistent identifiers for datasets that have not yet been published resolve to the Upcoming Studies page in Aila. Later, the DOI and URN for a specific study resolve to the study description page in Aila.

Qualitative data archived at FSD mainly consist of different types of textual data, mostly interview transcripts and research participant writings about their experiences and opinions on a range of themes. Under certain conditions, FSD can also archive photos, drawings or other images, but these do not form a significant part of the qualitative data archived. Moreover, there are often privacy, copyright, or ownership issues that researchers must take into consideration if they want to archive images as part of their qualitative data. FSD does not generally archive audiovisual material. In Finland, audiovisual material is mainly archived and disseminated for further research by the Language Bank of Finland (Fin-CLARIN).

During the first ten years, the average number of qualitative datasets received annually was less than ten. Since then, the number has considerably increased. Today, researchers themselves offer their data for archiving. This has allowed FSD to focus its resources more on data processing and guidance instead of searching for and acquiring data. The following graph (Figure 2) illustrates the accumulation of qualitative data over the last ten years.

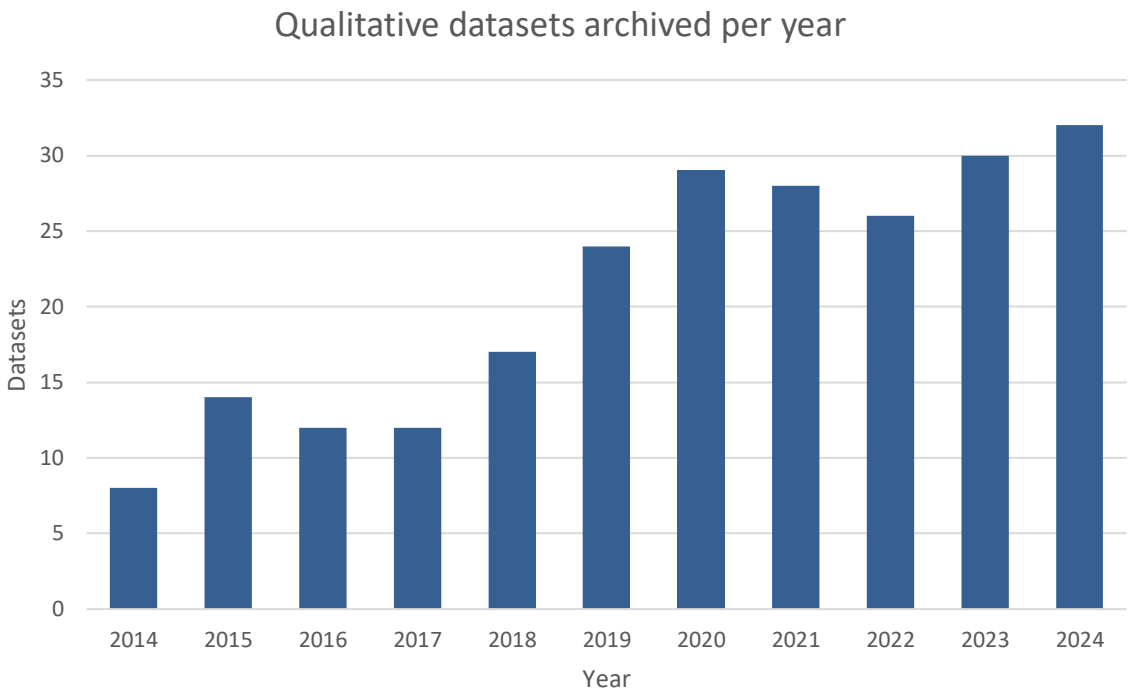

Figure 2 – The number of archived qualitative datasets 2014-2024.

Processing qualitative data is often labour-intensive and usually takes more time than processing quantitative data. At FSD, processing qualitative data includes converting data files, appraising the anonymisation done by the author, and creating data descriptions. In the past, a major part of qualitative data processing involved anonymising large amounts of text, which practically limited the amount of data that could be processed annually with the available human resources.

Due to the significant increase in the amount of qualitative data archived, FSD now requires that data be anonymised before submission. However, there is still much to be done to ensure the data are perfectly anonymous when transferred to FSD. FSD often needs to make adjustments to the anonymisation performed by the author.

Sometimes, albeit rarely, it may be justified to include personal data in the archived dataset. FSD collaborates with researchers in advance to assess whether there are legal and ethical grounds for archiving and further use of the data containing personal information.

Data processing tools

As mentioned, data processing requires a lot of work. FSD is constantly seeking technical solutions to make data processing more streamlined and less labour-intensive. For example, different ways of using AI in certain phases of data processing are being explored (Finnish Social Science Data Archive, 2025). Even though there are currently no fully reliable AI-based solutions that can anonymise qualitative data, data curators at FSD use a qualitative data processing tool ‘Kvalikirstu’ to assist with other data processing steps.

Kvalikirstu[9] is used to analyse unstructured and semi-structured information, organise data files, and generate a browsable and user-friendly HTML index for the data. It improves the efficiency, quality,

and speed of the archiving process. Using Kvalikirstu also provides improved standards conformance compared to manual processing of data. At FSD, we use Kvalikirstu to easily convert data files to the file format that meets our processing practices, add citation prompts and edit metadata in individual data files, and rename multiple data files at one go. With the tool, a customised data citation request can be easily added at the beginning of each data file.

Kvalikirstu's code is open source and therefore available for use by any repository archiving qualitative data. It can be without difficulty customised to meet the specific needs of each organisation. The user interface is by default in Finnish and English, but other translations can be added. (CESSDA, 2020)

The phases of data processing at FSD

In practice, processing of a qualitative dataset, such as an interview or a collection of written texts, proceeds as follows. First, the data is thoroughly reviewed. Particular attention is given to the anonymity of the data, as well as to the provided documentation and how the data and the contextual materials have been arranged. If anonymisation is inadequate or the dataset it is in other ways incomplete, it is likely returned to the researcher for re-anonymisation or further processing. If only minor additional anonymisation is needed, it is usually done at FSD. At the same time, FSD ensures that the background information added to the beginning of each text file by the researcher is formatted to allow automated data processing. Before a dataset is ready, any hidden technical metadata is removed from each file. These include e.g. author and location details (like GPS coordinates), version history, and IP-addresses.

Once the adequacy of anonymisation has been verified and data files are content-ready, Kvalikirstu steps in. Using Kvalikirstu, the files are converted into a format suitable for long-term preservation. The file formats currently used for preserving textual content are Open Document Type (ODT) and plain text. Using the same tool, the data files are also named and numbered systematically according to FSD's practices, with filenames also indicating the language of each file (e.g. daF1122_3_eng.odt). Additionally, a standard data citation request text is added at the beginning of each text file.

In case of textual data, the processed and archived qualitative dataset includes data description, data files in ODT or TXT, HTML and CSV versions of the data, and all the documents used during the data collection phase (e.g. interview questions and information letter to the research participants).

Prior to publishing the data description in FSD's data catalogue, the processed dataset intended for permanent storage is sent to the author for review and approval. At this point, authors are requested to erase all original or derivative files containing research participants' personal data, provided the research has been finished. We remind the authors that according to data protection requirements, personal data may only be stored for as long as it is necessary for the research. This is crucial. If the author retains original data with identifiers after the dataset becomes available for download at FSD, the data would not be anonymous, but pseudonymous. This would have an impact on reuse possibilities, as FSD cannot deliver the data to further use without separate permission from the depositor.

After the author has accepted the processed data, or in case no response is received within the requested timeframe, FSD publishes the data description and related materials on the Data Service

Portal Aila. From that moment on, the data is available for download under the agreed access conditions.

More complete anonymisation, more streamlined data processing practices

Nowadays, a significant portion of the data offered for archiving are already well anonymised by researchers before being transferred to FSD. Therefore, after extensive quality control and testing of various data quality assurance methods, we are confident in introducing a new level of data processing for well-anonymised qualitative data. Consequently, from 2025 onwards, it has been possible to process some submitted data by sample-checking the anonymisation of about 20% of the data files. For now, this practice is applied on a discretionary basis to a small portion of the data. This approach is suitable only for qualitative data, provided the researcher has carefully followed FSD's anonymisation guidelines and has described and documented the anonymisation policy in sufficient detail. Inspection of all anonymised data files is one concrete step where AI could substantially improve data processing in the near future. FSD has already tested this using AI tools approved by the university (Finnish Social Science Data Archive, 2025).

If researchers increasingly deposit well-anonymised data in the future, the data processing stage at FSD will become considerably faster. This is the direction in which we hope the archiving of qualitative data will develop. It would allow FSD, as well as other data archives, to process larger volumes of qualitative data in less time. This emphasises the need for detailed guidance and instruction for researchers during the data collection phase and highlights anonymisation as a key researcher skill.

Enough metadata for efficient archiving and reuse

When preparing metadata, FSD aims to ensure that the data are fully documented, but does not seek extensive documentation on the primary research. Metadata always includes information about fieldwork and data collection methods (e.g., interview questions, instructions, sample design) along with background information about each data file (e.g., age, gender, education). If a user of a qualitative dataset is interested in the primary project itself, bibliographic details of all project publications are included in the metadata. This level of detail in the documentation is efficient for the archiving process and sufficient for our customers, since it is extremely rare for anyone to try to reproduce or replicate the original qualitative research. The emphasis in data documentation is on reuse possibilities, not reproduction. Researchers often use archived qualitative data to supplement their own data or to gain ideas for designing their new qualitative data collection.

During the first decade, reuse of qualitative data was relatively moderate, largely because the amount of qualitative data in the collection was quite low. Initially, data was delivered by posting compact discs (CDs) to researchers and later sent as email attachments. Between 2003-2013, qualitative datasets were delivered for reuse 20-90 times annually. Demand focused on quantitative data, but the share of qualitative data delivered gradually increased from 10% to 15%.

When FSD published the Aila Data Service in 2014, reuse of all archived datasets increased remarkably. In Aila, datasets could be easily discovered, and downloading was simple and free of charge.

In addition, one of Kvalikirstu's most prominent features, as described above, is its ability to produce an easy-to-use HTML version of the textual data. This HTML version can be navigated through a directory built based on the background information in the data. Using this directory, the data can be easily browsed and sorted based on selected background details, such as the gender or age group of research participants. The available background information varies depending on the data.

The HTML interface also includes a search function, allowing users to narrow down the data using desired keywords. These features greatly assist in refining and selecting only the relevant parts of the data needed for the study at hand (see Figure 3).

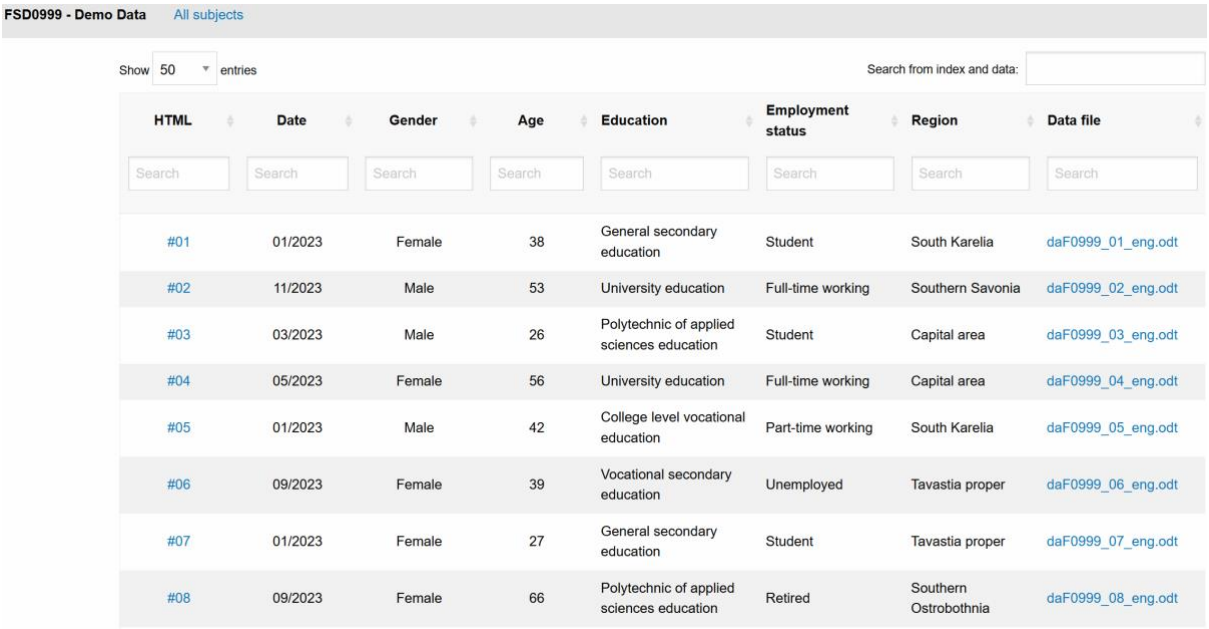

Figure 3 – Example of an HTML index created by Kvalikirstu.

Five years ago, qualitative data downloads accounted for 20% of all downloads. Over the last three years, this share has risen to 30%. This is significant, as qualitative datasets represent only 20% of the total data collection at FSD. The high utilisation rate reflects the strong position of qualitative methods in Finnish social sciences research. For example, several universities offer method courses at both graduate and post-graduate levels that include the theory of rhetoric, narratology, discourse analysis, conversation analysis, and ethnography.

Purpose of use / Year	2020	2021	2022	2023	2024
Research and PhD	100	66	102	90	98
Master's thesis	169	175	297	407	489
Bachelor's thesis	54	112	181	204	138
Teaching	60	94	117	163	143
Studying	257	567	1049	1095	1255
Other / open data	9	115	125	135	110
Total	649	1129	1871	2095	2233

Table 1 – Qualitative data downloads in 2020-2025 by purpose of use.

Qualitative data are particularly useful for students

FSD makes it possible for teachers and students to access high-quality, well-documented research data free of charge. The educational relevance of FSD's data collection is substantial. Qualitative data are widely used by teachers in higher education for research methods courses. Students also familiarise themselves with the data held by FSD through the archive's online *Research Methods Guidebook*[10]. Feedback from the teachers shows that learning analytical methods is more rewarding when one can use real research data in exercises, ideally on a topic of one's own interest[11]. As a result, many students use FSD data as exercise material during methodology courses and later on use archived data for their bachelor's or master's theses.

There are several reasons why qualitative data are popular among students. A dataset acquired from the data archive is likely to be far more extensive and of higher quality than data collected by a student with limited resources. Using an existing dataset allows students to spend significantly more time to thinking, analysis, and interpretation rather than data collection. This can be an opportunity to demonstrate their potential in scientific analysis. Additionally, using an existing dataset makes it easier to complete the thesis, as one part of the work is already done. This accelerates graduation for students who want to finish their master's thesis and move on to paid employment. For some, ready-to-use qualitative data may be the last resort to graduate and obtain their degree. Reusing data also helps avoid overburdening research participants with excessive data collection requests.

Conclusions

FSD began archiving qualitative data in 2003. The beginning was challenging due to research community's concerns about confidentiality and ethics. These concerns served as a guideline when drafting FSD's guides for archiving qualitative data. However, two decades of progress toward opening up data would not have been possible solely through FSD's efforts. The global open science movement, and especially in Finland, played an important role in shifting the culture among qualitative researchers toward more favourable stance to archiving and opening qualitative data.

FSD's tools like Kvalikirstu have been important in streamlining the processing and archiving of qualitative data. However, the most important factor in the success and consolidation of archiving qualitative data has been FSD's comprehensive Data Management Guidelines. These guidelines help researchers in preparing data for archiving, covering everything from consent forms to anonymisation and metadata production.

As the reuse statistics in this article show, researchers are not as eager to use archived qualitative data as students. Although researchers encourage students to utilise archived qualitative datasets in their studies, there still appears to be a generation gap. Based on our experience, young researchers who have completed their theses using archived data are more likely to archive their own data and reuse archived data in their future research. One of our customers recently mentioned that senior researchers in a large project asked younger colleagues to handle the data preparation for archiving, saying, "we do not know anything about opening data." This suggests that senior researchers accept the principles of open science, even if they are reluctant to practice it themselves. The culture in qualitative research is shifting toward openness.

In the future, AI will undoubtedly bring new opportunities for both archives and researchers. It will be interesting to see how it can be used to speed up data processing. Anonymisation of original research data with AI assistance requires technically safe and secure processing environments. It appears that Finnish universities have recognised this challenge.

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[4] The abstract was generated using AI (Microsoft Copilot) and subsequently edited by authors.

[5] Declaration for Open Science and Research 2025–2030: https://doi.org/10.23847/tsv.1358

[6] Policy for Open Research Data and Methods: https://doi.org/10.23847/tsv.669

[7] Open Science and Research Reference Architecture 2024–2030: https://doi.org/10.23847/tsv.942

[8] Data Management Guidelines: https://www.fsd.tuni.fi/en/services/data-management-guidelines/

[9] Kvalikirstu software: https://gitlab.tuni.fi/fsd/kvalikirstu2

[10] Research Methods Guidebook: https://www.fsd.tuni.fi/en/services/research-methods-web-resource/

[11] The archive stores all direct customer feedback in its database and conducts surveys among its customers every few years. Read more about how FSD's quality of assurance procedures https://www.fsd.tuni.fi/en/data-archive/quality-assurance/