

Suppl 1. Interview questionnaire on research experience based on digital scholarship research lifecycle.

1. Research Plan Process

1.1 Please explain the research plan process based on your experience in conducting digital scholarship research.

1.1.1 Research plan process (funding, collaboration, personnel, etc.)

1.1.2 Analysis of previous research

1.1.3 Access and collection methods for preliminary datasets

1.1.4 Selection of research topic

1.1.5 What were the difficulties in the research planning process?

1.2 Regarding the utilization of digital resources in the research planning process, please provide your opinion.

1.2.1 Did you consider the digital resources as a dataset for your research?

1.2.2 Is there a possibility of utilizing the digital resources for future digital scholarship research? Which digital resources are available for use and why?

1.3 Please suggest potential research information services based on your research planning process.

2. Research Execution Process

2.1 Please explain the research execution process based on your experience in conducting digital scholarship research.

2.1.1 Collecting research dataset

2.1.2 Organizing research dataset

2.1.3 Applying data analysis techniques to the research dataset

2.1.4 Interpretation of analysis results

2.2 "What were the difficulties during the research process?"

Example: Difficulty in understanding the subject matter of digital research data, difficulty in accessing data, difficulty in organizing data, difficulty in analyzing digital technology methodology, difficulty in interpreting analysis results, etc.

2.3 Please suggest what can be developed as research information services in the future during the research planning process. The need for research support information services / education support services

Example: Digital scholarship research consulting service needs

Example: Education on data (content) itself

Education on data (content) transformation and structuring

Education on data (content) analysis techniques

Education on digital scholarship research methodology

3. Research Outcome Publication Process

3.1 Please tell me about your experience with presenting and publishing research results. Where do you mainly present and publish? (Use of Open Access)

- 3.2 How do you manage research outcome datasets? (Donation to data repositories, etc.)
- 3.3 How is the sharing and citation of research data being done?
- 3.4 What are the difficulties in the research outcome publishing process?
- 3.5 Please suggest what can be developed as research information services in the future during the research outcome publishing process.

4. Research Dissemination Process

- 4.1 Please tell me about your experience with disseminating research results.
- 4.2 Have you ever used social media or content creation to promote your research results? Or do you have any other experiences and suggestions?
- 4.3 What are the difficulties in the research dissemination process?
- 4.4 Please suggest what can be developed as research information services in the future during the research dissemination process.

5. Research Data Preservation

- 5.1 Please provide your experience and suggestions on preserving research data outcomes.
- 5.2 Conversion of future sustainable data formats and media
- 5.3 Donation of research outcome data to reliable institutions for preservation.
- 5.4 What are the difficulties in the research data preservation process?
- 5.5 Please suggest what can be developed as research information services in the future during the research data preservation process.

6. Reuse of Research Results

- 6.1 Please share your experiences and methods for maintaining and managing research data for reuse of research results.
- 6.2 What are the difficulties in reusing research results?
- 6.3 Please suggest what kind of information services can be developed in libraries for reusing research data.