Open Data and Data Portals for Research Use Training Course

Professional Development Training Course Outline

Category	Research and Data Analysis	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Open Data and Data Portals for Research Use Training Course is a comprehensive program designed to empower researchers, data analysts, and policy makers with the knowledge and skills to effectively utilize open data for impactful research and decision-making. As open data continues to revolutionize how public information is accessed and analyzed, this course explores practical tools, global data portals, and strategic data sourcing methods. By focusing on open government data, FAIR principles, metadata standards, and open-access platforms, participants will gain actionable insights to enhance data-driven research capabilities.

This hands-on course is ideal for professionals seeking to deepen their understanding of data governance, transparency, and research reproducibility through open data ecosystems. Learners will engage with top-tier platforms like World Bank Open Data, OpenAIRE, CKAN, data.gov, and more. Through real-life case studies and interactive modules, participants will master how to discover, assess, download, clean, and reuse datasets for scholarly and institutional research—ensuring their research remains robust, verifiable, and globally aligned with best practices in open science.

Programme Curriculum

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Course Objectives

1. Understand the fundamentals of open data and its value in research.
2. Explore key global and national open data portals.
3. Apply the FAIR data principles to ensure data is findable and reusable.
4. Evaluate the quality and reliability of open data sources.
5. Learn metadata standards and open data documentation.
6. Use APIs and bulk downloads from open data repositories.
7. Integrate open data into qualitative and quantitative research.
8. Apply data visualization techniques to open datasets.
9. Address legal and ethical issues in open data use.
10. Analyze open government data to inform policy.
11. Enhance collaboration through data sharing platforms.
12. Develop reproducible research workflows using open data.
13. Gain practical experience with real-world open data case studies.

Target Audiences

1. Academic researchers and scholars
2. Government policy analysts
3. Data journalists
4. Research data managers
5. University faculty and students
6. Nonprofit and development professionals
7. ICT and data engineers
8. Librarians and information scientists

Course Duration: 10 days

Course Modules

Module 1: Introduction to Open Data

- Definition and benefits of open data
- Historical evolution and global movements
- Principles of openness and transparency
- Key stakeholders in the open data ecosystem
- Challenges and opportunities
- **Case Study**: The Impact of Open Data in COVID-19 Research

Module 2: FAIR Principles in Open Data

- Overview of FAIR (Findable, Accessible, Interoperable, Reusable)
- Implementing FAIR in academic research
- Tools for assessing FAIRness
- FAIR-compliant metadata tools
- Global standards and initiatives

- **Case Study**: FAIR Implementation at European Open Science Cloud

Module 3: Global Open Data Portals

- Top open data portals (World Bank, UN, data.gov)
- Portal navigation and data discovery
- Comparing portal capabilities
- Downloading and analyzing datasets
- Portal-specific documentation
- **Case Study**: Using World Bank Open Data for Policy Analysis

Module 4: National and Regional Portals

- Overview of national portals (e.g., Kenya Open Data, India Data Portal)
- Localization of data and use cases
- Sector-specific datasets
- Data extraction and preprocessing
- Linking national data with global indicators
- **Case Study**: Kenyan Open Data for Health Research

Module 5: Metadata Standards and Interoperability

- Key metadata schemas (DCAT, Dublin Core)
- Role of metadata in open data ecosystems
- Interoperability best practices
- Data citation standards
- Machine-readable formats
- **Case Study**: Metadata in Humanitarian Data Exchange (HDX)

Module 6: Open Government Data (OGD)

- Definition and value of OGD
- Laws and policies enabling OGD
- Public sector data publication workflow
- Civic tech and data journalism
- Public-private partnerships
- **Case Study**: Open Government Data in Estonia

Module 7: Open Data Ethics and Licensing

- Legal considerations and open licenses (ODC, Creative Commons)
- Privacy and data protection
- Ethical data use in research
- Sensitive data and anonymization
- License compatibility and reuse conditions
- **Case Study**: GDPR and Open Data Use in the EU

Module 8: Data Extraction and APIs

- Accessing data via APIs
- Tools and languages for API access (Python, R)
- Handling large datasets
- Real-time data retrieval
- Authentication and access limits
- **Case Study**: Using CKAN API for Environmental Data

Module 9: Data Cleaning and Preparation

- Data wrangling with open tools
- Managing missing or inconsistent data
- OpenRefine and other open-source tools
- Preprocessing techniques for research
- Exporting data for analysis
- **Case Study**: Preprocessing Open Data for Climate Studies

Module 10: Data Visualization and Storytelling

- Visualizing open data with open tools
- Charting tools and dashboards
- Infographics for policy communication
- Data storytelling techniques
- Interactive web tools (Tableau Public, Flourish)
- **Case Study**: Visualizing Public Education Data

Module 11: Integrating Open Data into Research

- Mapping research questions to open data sources
- Combining open data with proprietary datasets
- Case-based research models
- Interdisciplinary applications
- Reporting and publication support
- **Case Study**: Open Data in Public Health Research

Module 12: Reproducible Research Workflows

- Version control and documentation
- Open-source tools for reproducibility (Jupyter, RStudio)
- Data pipelines
- Collaborative research practices
- Transparent data sharing
- **Case Study**: Reproducibility in Social Science Research

Module 13: Evaluating Open Data Quality

- Quality assessment frameworks
- Criteria: completeness, accuracy, timeliness
- Data reliability checks
- Benchmarking against global datasets
- Feedback and reporting mechanisms
- **Case Study**: Evaluating Food Security Data

Module 14: Data Sharing and Collaboration

- Platforms for collaborative open research
- Research data repositories
- Building research communities
- Role of preprints and open peer review
- Institutional repositories
- **Case Study**: Zenodo and Data Sharing in H2020 Projects

Module 15: Capstone Project: Applying Open Data

- Defining a research problem
- Selecting datasets

- Performing analysis
- Visualizing results
- Preparing a research brief
- **Case Study**: Final Projects Showcasing Multi-Sectoral Use

Training Methodology

- Interactive lectures and guided tutorials
- Hands-on practical exercises and tool demos
- Real-world datasets for case study work
- Group projects and peer reviews
- Self-paced modules with instructor feedback
- Access to digital resource toolkit and templates

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

Ready to enroll or request a customized program? Book online or contact us:

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