Meta-Research in Science of Science Analysis Training Course

Professional Development Training Course Outline

Category	Research and Data Analysis	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In an era where misinformation, ethical dilemmas, and politicized narratives challenge evidence-based research, the need for meticulous meta-research and sensitivity in handling delicate topics has never been more critical. Meta-Research in Science of Science Analysis Training Course offers a deep dive into researching sensitive subjects, emphasizing ethical standards, data integrity, and science-of-science methodologies that empower researchers to analyze, interpret, and communicate research responsibly. Participants will explore how to conduct meta-research to improve reproducibility, transparency, and policy impact in academic publishing and social sciences.

With the explosion of digital data and increased public scrutiny on how science is conducted, researchers must navigate bias, funding influence, censorship, and ethical approval processes. This course equips learners with tools for systematic literature reviews, quantitative and qualitative meta-analysis, and the use of digital tools and AI to conduct and critique science effectively. It empowers researchers, journalists, and policymakers to champion rigorous research standards in areas where truth is contested or emotionally charged.

Programme Curriculum

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Course Objectives

1. Understand the fundamentals of meta-research and science of science analysis.
2. Develop ethical frameworks for researching sensitive topics such as trauma, abuse, identity, or politics.
3. Identify and address biases in scientific publishing and reporting.
4. Apply tools for systematic reviews and meta-analyses across disciplines.
5. Evaluate research design using open science practices.
6. Analyze the impact of publication bias and data manipulation.
7. Leverage AI tools for automated meta-research and text mining.
8. Explore the role of science policy, funding, and power structures in research.
9. Build skills in research reproducibility and transparency evaluation.
10. Conduct ethical participant recruitment in high-risk or marginalized communities.
11. Apply qualitative coding for sensitive narratives and lived experiences.
12. Understand the implications of data privacy, GDPR, and institutional ethics boards.
13. Build resilience against researcher burnout and vicarious trauma when working on difficult subjects.

Target Audiences

1. Academic Researchers
2. Journalists Investigating Controversial Topics
3. Science Policy Makers
4. Research Ethics Committee Members
5. PhD and Postdoctoral Researchers
6. NGO and Human Rights Researchers
7. Mental Health & Social Work Scholars
8. Data Analysts and Meta-Science Enthusiasts

Course Duration: 5 days

Course Modules

Module 1: Introduction to Meta-Research and Sensitive Topics

- Definitions and scope of meta-research
- Sensitivity in research: ethics and risk
- Case typologies: controversial, personal, political
- Foundations of science of science
- Key challenges in sensitive topic research
- **Case Study**: Replication crisis in psychology

Module 2: Ethical Research Design and Institutional Approval

- Understanding IRB and ethics board requirements
- Informed consent in vulnerable populations
- Trauma-informed methodologies
- Navigating researcher safety
- Ethics in digital and AI-driven research

- **Case Study**: Ethics review of a refugee trauma study

Module 3: Science of Science – Frameworks and Metrics

- Citation networks and bibliometrics
- Authorship patterns and gender equity
- Altmetrics vs. traditional impact
- Science mapping tools
- Detecting retractions and anomalies
- **Case Study**: Gender bias in STEM publication patterns

Module 4: Systematic Reviews and Meta-Analysis Techniques

- PRISMA and Cochrane guidelines
- Grey literature and database searching
- Statistical techniques for meta-analysis
- Coding and categorization in qualitative synthesis
- Visualizing outcomes with forest plots
- **Case Study**: Meta-analysis on suicide intervention efficacy

Module 5: Addressing Bias, Censorship, and Misrepresentation

- Types of research bias
- The role of ideology and funding
- Retractions and replication failures
- Strategies for decolonizing research
- Recognizing and mitigating self-censorship
- **Case Study**: Funding bias in pharmaceutical trials

Module 6: Technology and AI in Meta-Research

- Tools for automated literature analysis
- Machine learning for trend detection
- Text mining and NLP for large corpora
- Software for reproducibility (e.g., JASP, R, OpenMeta)
- Ethical AI use in research
- **Case Study**: AI in COVID-19 misinformation tracking

Module 7: Qualitative Approaches to Sensitive Narratives

- Coding trauma and lived experience
- Reflexivity and researcher bias
- Participatory action research (PAR)
- Anonymity and narrative ownership
- Transcription and data validation tools
- **Case Study**: Indigenous storytelling in climate research

Module 8: Policy Impact, Public Communication, and Researcher Well-being

- Translating research into policy
- Science communication for hostile audiences
- Dealing with harassment and backlash
- Supporting team mental health
- Advocacy and ethical whistleblowing
- **Case Study**: Media backlash to gun violence study

Training Methodology

- Interactive lectures with multimedia support
- Group-based case study discussions
- Hands-on exercises using real-world datasets
- Guided use of AI and open-source tools
- Peer-to-peer feedback and reflection journals
- Final project: Design and critique a meta-research protocol

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	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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

Register Online Now

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