ASSOCIATION OF AFRICAN UNIVERSITIES

CERTIFICATE WORKSHOP: DATA ETHICS AND SKILLS FOR REPRODUCTION OF RESEARCH FINDINGS USING STATA

CONCEPT NOTE

1. BACKGROUND

Over the past decades; transparency, openness and reproducibility have increasingly been recognized as key features of research quality and integrity. The Berkeley Initiative for Transparency in the Social Sciences (BITSS) was established in 2012 to strengthen the quality of Social Science research and evidence used for policy-making, by enhancing the practices of economists, psychologists, political scientists, and other social scientists. Likewise, the Centre for Open Science (COS) was also created to promote openness, integrity and reproducible research. The Research Transparency Initiative of the Innovation for Poverty Action (IPA) was also launched in 2014 to promote data sharing, coding as well as pre-registration of research studies.

These initiatives have led to the introduction of legislative and regulatory policies requiring researchers to make data available to others in a timely and responsible manner. It is believed that, enabling researchers and other users to access, combine and use data could open up new avenues for discovery and innovation that might never have been anticipated by the original data generators. Also, access to the data underlying research findings is critical to ensure that these claims can be scrutinised and reproduced.

In most scientific fields, research results are validated through reproducibility: This involves methods to ensure that independent scientists can reproduce published results by using the same procedures and data as the original investigators. It also requires that the primary investigators share their data and methodological details. These include, at a minimum, the original protocol, the dataset used for the analysis, and the computer code used to produce the results[1].

However, despite the efforts provided by BITSS, COS and the IPA; transparency, reproducibility and open science is still not entrenched enough in the norms of academic researchers of the world in general, specifically in Sub Saharan Africa[2].

Evidence have shown that most of African researchers still face difficulties in publishing their research findings (World Education News and Review, 2015). This may be due to among other reasons, the lack of

[1] C. Laine, S. N. Goodman, M. E. Griswold, and H. C. Sox. Reproducible research: Moving toward research the public can really trust. Annals of Internal Medicine, 146: 450453, 2007.

[2] Improve Evidence-Based Policy Making in Sub Saharan Africa - https://openinorder.to/improve-evidence-based-policy-making-in-sub-saharan-africa/

research quality, poor data ethics and lack of appreciation of the data manipulation process[3] and integrity of their research. Besides, it is generally agreed that training plays a vital role in improving performance (Swart et al, 2005; Purcell et al 2003). Thus, teaching African researchers on transparent, reproducible and open methods could increase their research quality and integrity.

To meet this rising demand of research transparency and reproducibility and equip researchers, academics and development professionals with the necessary tools to undertake effective data management and analysis, the Association of African Universities **(AAU)** is offering a four day training workshop titled ***Data Ethics and Skills for Reproduction of Research Findings Using Stata***.

At AAU we believe that empowering the next generation of African researchers will help us climb what Barba (2016) calls "the hard road to reproducible research", by encouraging and facilitating ethical data management and research conduct.

2. WORKSHOP OVERVIEW

The aim of this workshop is to train the next generation of African researchers in tools and practices to enhance the transparency, reproducibility, and openness of their research.

The workshop will introduce participant to the data landscape of Africa, immerging issues with raw data; academic research misconducts (Publication Bias); best practices for data and code management; Data sharing and the construction of a reproducible and transparent workflow using STATA.

The workshop will comprise of both a theoretical content (in which the techniques and underlying principles behind them are explained), and an applied (hands-on) segment, during which participants will have the opportunity to perform the techniques learned.

3. LEARNING OBJECTIVES

The core objectives of the workshop is to;

a) Sensitize participant on various academic research misconducts (ethical issues) as well as the lack of sharing and openness in research.
b) Expose participants to best practices for research Reproducibility, Replicability and Reanalysis (Pre-registration, Pre-Analysis Plan, Data sharing and the construction of a reproducible and transparent workflow).
c) Equip participants with the requisite competence in data and code management using STATA as a tool.
d) Provide participants with the necessary introductory toolset to enable them to carry out efficient data analysis in STATA.

[3] Annim, S. K. (2018). Reproducibility of statistical data, academic publications and policy implications: Evidence from Ghana. Data in Brief, 18, 1298–1312.

After the workshop, participants will appreciate the concept of research transparency, reproducibility, and openness as well as raise their awareness on common academic and policy research misconducts allowing them to produce reliable, trustable and publishable research outputs to guide policy making.

Participants will be able to take raw data collected in their respective fields, clean it, summarise it, analyse it and take appropriate action. They will also achieve the understanding of descriptive statistics, bi-variate and inferential statistics. Participants will also be able to critically analyse research outputs and interpret STATA codes.

4. PROGRAMMES

To achieve the stated objectives, the workshop will cover the following:

a) Research Ethics;
b) Research Impact, Visibility, Open Access, Reproducibility, Replicability and Reanalysis;
c) Rubrics of STATA;
d) Data Validation, Accuracy and Comprehensiveness; and
e) Regression Analyses - Overview of Issues of Internal and External Validity

5. TARGET AUDIENCE

This workshop is invaluable to researchers, academics, postgraduate students, policy makers and staff of statistical institutions (working in Epidemiology, Biostatistics, Public Health, Medicine, Social and Political Sciences, Business Studies, Marketing and Management, Economics and Statistics) wishing to use Stata for applied statistical analysis, and data management.

6. PREREQUISITE

- Familiarity with computers and a working knowledge of English is required. The workshop does not require any specialized knowledge in programming.
- To maximize the usefulness of this course, we strongly recommend that participants bring their own laptops with them, to enable them to actively participate in the practical sessions.

7. DATE AND VENUE

The workshop will take place on: 7th – 10th August, 2018 at the AAU secretariat, Accra – Ghana.

8. FEES AND REGISTRATION

Students*: $ 200

AAU Member Institutions: $ 350

Non-member Institutions, Non-Profit/Public, Research Centres: $ 400

*To be eligible for student prices, participants must provide proof of their full-time student status for the current academic year.

Course fees cover: course materials (handouts, Stata do files and datasets to be used during the workshop), a temporary licence of Stata valid for 30 days from the beginning of the course, lunch and coffee breaks.

Participants will be responsible for their own accommodation and travel-related costs, such as flights.

9. REGISTRATION PROCESS

Individuals interested in attending the training workshop, must complete an online registration forms (click here) by - **30th July, 2018**.

The number of participants is limited to **30**. Places, will be allocated on a first come, first serve basis. The course will be officially confirmed, when at least **15** individuals are enrolled.

10. PRINCIPAL FACILITATOR:

Prof. Samuel Kobina Annim - Director of the Directorate of Research, Innovation and Consultancy (DRIC)

11. USEFUL TEXTS:

Annim, S. K. (2018). Reproducibility of statistical data, academic publications and policy implications: Evidence from Ghana. Data in Brief, 18, 1298–1312

The Best Practices for Data and Code Management Manual, Innovations for Poverty Action.

A Gentle Introduction to Stata, 5th Ed. Stata Press 2016, (Alan Acock)

12. CONTACT INFORMATION:

Registration, logistics (accommodation reservation) and visas: Samuel Nyarko Agyapong - sagyapong@aau.org; CC: Ms Nodumo Dhlamini - ndhlamini@aau.org.

Further details regarding our payment procedure can be found at: https://blog.aau.org/our-bank-details/