

UNESCO Institute for Statistics
in collaboration with
Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (INEP)

WEI-SPS Data Analysis Workshop

Brasilia, Brazil
2 – 6 June 2008

A workshop will be held on the analysis of data from Survey of Primary Schools, as part of the World Education Indicators programme (WEI-SPS). WEI-SPS, a school-based sample survey, was carried out in eleven WEI participating countries in 2005-2006. The aims were provide comparative information about the functioning of primary schools. Between 450 and 1,250 schools containing Grade 4 in each of the eleven countries participated in the study. These included six countries in Latin America (Argentina, Brazil, Chile, Paraguay, Peru and Uruguay), four in Asia (India, Malaysia, Philippines and Sri Lanka) and Tunisia.

Objectives of the workshop and expected outcomes

The workshop aims to support the preparation of national reports using WEI-SPS data. It will introduce, explain, and provide practice in dealing with technical issues arising from the analysis of WEI-SPS data for national reports. The workshop has three major objectives:

- 1) to introduce advanced statistical methods in analyzing data from surveys with a complex design and methods in constructing composite indices;
- 2) to demonstrate how these methods can be used in analysing the WEI-SPS data for national reporting;
- 3) to assist participants in producing a core set of tables and charts to be used for their national reports.

The main outcomes of the workshop are 1) a detailed analysis plan for a research project that leads to a national report, a conference presentation or a research paper to summarise the WEI-SPS findings; and 2) a set of data tables and charts to be used as the core materials for the above-mentioned outputs.

Structure of the workshop

The workshop will combine presentations on essential statistical concepts related to WEI-SPS data analysis, demonstrations of a range of techniques in using SPSS and SAS for analysing the data, hands-on data analysis, as well as discussions on the analysis of national data. It is expected that all the participants have experiences in using SPSS or SAS program and differences in the knowledge and skills will be addressed individually.

What is expected of the participants?

Prior to the workshop, the participants are required to prepare a preliminary research plan, consisting of the following:

- A list of policy questions to be explored in the data analysis and a more detailed description of these questions, i.e. why are these questions relevant in your national context and what do you expect to find out based on previous research;
- A tentative structure of the national report (what each chapter or section will be);
- A list of variables that you identify from the database to be analysed in order to address these questions.

As a starting point for preparing the above, the participants may wish to read the draft of the International Report and the paper on the conceptual framework of WEI-SPS prepared by Mr. Jaap Scheerens (contact the WEI team at the UIS if you do not have a copy of this document).

During the workshop, the participants are expected to present their research plans, make revisions on the basis of discussions, implement at least part of the analysis plan, and discuss any issues that they have encountered. It is anticipated that at the start of the workshop some research projects will be at a relatively advanced stage and some are just beginning. There will be ample opportunities for the participants to interact with workshop instructors to get individualised assistance to meet their needs.

Computers and software packages

Each participant should bring her/his laptop with the following applications installed:

- MS Office, including Word and Excel
- SPSS software package (version 14 or higher) and SPSS Tables (an add-on module) or SAS (version 8 or higher).

Ideally, each participant brings his or her own laptop. If a country sends a team of two or three individuals, then the team members can share one laptop.

Costs

The costs of holding the workshop will be covered by the UIS and INEP. However, participants are expected to cover their own costs of travel, accommodation, meals and incidental expenses. For countries that need financial support in order to participate, please contact the UIS. A national report plan is required in order to receive such support.

Deadlines

30 April 2008: Complete and return the registration form

12 May 2008: Send the preliminary research plan

Workshop on the national analysis of WEI-SPS data: Tentative agenda

	Day 1	Day 2	Day 3	Day 4	Day 5
Session 1 9:00 – 10:30	WEI-SPS and policy Q's; Outline of a national report; Sampling weights; Variance estimation in SPS data; Structure of SPS data and managing data files	Composite index: Why and how – explanation and demonstration of creating a composite index; Analysing, presentation and interpreting composite index variables	Studying relationships between two continuous variables: analysing, presenting and interpreting correlation tables	Comparing my country to other WEI/SPS countries: What are my country's strengths and weaknesses?	Hands-on data analysis/discussion of individual research plans with experts
Health break 1:30 – 11:00					
Session 2 11:00 – 12:30	Linking research questions to data analysis: Dummy tables Categorical variables: Analysing, presenting and interpreting percentages: explanation & demonstration	Studying differences by region/sector/location using composite index variables: test of statistical significance, interpreting and displaying analytic results	Hands-on data analysis/discussion of individual research plans with experts	Hands-on data analysis/discussion of individual research plans with experts	Recap: Linking policy/research questions with data analysis Writing with audience in mind
Lunch 12:30 – 2:00					
Session 3 2:00 – 3:30	Merging data files Recoding variables	Hands-on data analysis Presentation/discussion of individual research plans with experts	Explaining and discussing data findings	Statistical vis-à-vis substantive significance	Next steps: discussion of revised plan for national report
Health break 3:30 – 4:00					
Session 4 4:00 – 5:30	Hands-on data analysis Presentation/discussion of individual research plans with experts	Graphic and tabular presentation of data results	Hands-on data analysis Presentation/discussion of individual research plans with experts	Hands-on data analysis/discussion of individual research plans with experts	Next steps: discussion of revised plan for national report

Workshop on the national analysis of WEI-SPS data: Tentative agenda

	Day 1	Day 2	Day 3	Day 4	Day 5
Session 1 9:00 – 10:30	Agenda discussion International report Outline of national report Dummy tables (Yanhong)	Composite index Why and how – explanation and demonstration of creating a composite index; Analysing, presentation and interpreting composite index variables (effect sizes differences) (Yanhong)	Correlation Studying relationships between two continuous variables: analysing, presenting and interpreting correlation tables Correlation presentation of macros (Nasser)	Cross national comparison What are my country's strengths and weaknesses? (ex. composite index/ national versus international standardization) (Yanhong) Statistical vis-à-vis substantive significance (Yanhong)	Country presentations
Health break 10:30 – 11:00					
Session 2 11:00 – 12:30	Features of WEI-SPS design Stratification; Clustering; Sampling weights; Bootstrap variance estimation (Nasser)	Presentation of macros for means and difference in means. (Nasser) Presenting and interpreting means; Test of statistical significance	Hands-on data analysis	Hands-on data analysis	Recap: Linking policy/research questions with data analysis Writing with audience in mind (Yanhong) SPSS add-on (Nasser)
Lunch 12:30 – 2:00					
Session 3 2:00 – 3:30	Structure of SPS data files and managing data files (Sonia) Merging data files; Recoding variables Categorical variables Analyzing Presenting and interpreting percentages (Nasser) Explanation & demonstration of macros	Hands-on data analysis	Weights / generalization (ex. % schools having library and % of pupils having library) Explaining and discussing data findings (Yanhong)	Country presentations	Questions session
Health break 3:30 – 4:00					
Session 4 4:00 – 5:30	Hands-on data analysis for dummy tables	Graphic and tabular presentation of data results (Sonia)	Hands-on data analysis	Country presentations	

