

NEPS Metadata Editor

Introduction to the prototype and further
developments

NEPS Metadata Editor

Agenda

- Introduction to the TBA Project
- Introduction to NEPS
- Software development for NEPS
- NEPS Technology Basis
- NEPS Metadata Editor
- Live demonstration of the prototype
- Current database structure and upcoming changes
- Discussion

Introduction to the TBA Project

- In 2007 the German Institute for International Educational Research (DIPF) started the research cluster TBA to implement computer based testing for German educational studies
- The abbreviation TBA stands for „Technology Based Assessment“, which means not only computers should be the focus of this group, but also other technologies (e.g. innovative input methods, electronic ink, testing on mobiles)
- To satisfy the needs of the scientific community the team is divided between psychometricians and computer scientists
- Team consists at the moment of 25 researchers and programmers involved in various projects (e.g. PISA 2009/2012, PIAAC)
- In NEPS TBA contributes with two work packages – Data Warehouse Development and Mode Effects Study (Work packages WP 13b and WP 13c)

A short introduction to NEPS

- Longitudinal panel study with projected running time of more than 20 years
- Interdisciplinary excellence network of researchers from various disciplines headed by Prof. Dr. Blossfeld of the University of Bamberg
- Responsible for setting up and coordinating the project is the Institute for Longitudinal Educational Research in Bamberg (INBIL)
- Funded by the German Federal Ministry of Education and Research
- Challenges: high complexity, collaboration of different institutes, long running time
- Division in five pillars with eight stages
- Multicohort sequence design (six different starting cohorts, several special samples)

- To be shown in the next two graphical slides

Software Development for NEPS

- NEPS – National Educational Panel Study means several challenges for software development (e.g. longitudinal study, long running time, data archival)
- The following components will be developed
 - Metadata Editor
 - User Rights Management
 - OLTP Database (further development to a Data Warehouse structure)
 - Reporting Services (e.g. for printing codebooks)
 - Analysis Service (for statistical analysis)
 - Integration Service (im- and export to various formats, e.g. SPSS / Stata)
 - Integration to TBA or CBA systems (e.g. connection to BQ Engine)
 - (Edu)DDI integration (im- and export, database structure)

NEPS Technology basis

- Programming environment
 - .NET Framework 3.5 and upcoming releases
 - C#
 - Visual Studio 2008 and upcoming releases
- Database
 - SQL Server 2008 and upcoming releases
- Web Server
 - IIS 7.0 and upcoming releases
- Though Microsoft products will be used as platform, the code will be fully open source

NEPS Metadata Editor

- Prototype version uses Windows Forms as presentation layer, background connectivity to the database is implemented as web service
- Later versions will use Web Forms or Silverlight as presentation layer
- DDI or other im- and export functionality will mainly be database driven by additional web services
- The editor will be present in two versions
 - One specific NEPS-only version for the item editors in this project
 - A more extensive general version will be published in the long run

Live Demonstration

- Please remember this is work in progress
- If you have seen a previous release, some GUIs have changed

Current database structure

- The current database structure is very similar to DDI3, but not fully compliant
- A workshop is planned in January to adjust the current database design and also the .NET object model to DDI3
- Though there are NEPS-specific tables which currently cannot be matched to DDI nomenklatur (e.g. pillar, stage)

- Here an outlook at the current database structure

Any Questions?