Survey Workbench v2.0

User Manual

February 2026

Version 2.0 – Internal Use Only

Contents

1 Overview

The Survey Workbench is a comprehensive tool for managing participant folders and extracting survey data from questionnaires. Version 2.0 introduces dynamic questionnaire support, allowing unlimited questionnaire types per participant.

1.1 Key Features

- Dynamic questionnaire configuration (unlimited types)
- Automated participant folder generation
- Data extraction from completed questionnaires to Excel
- Configuration save/load system
- Individual questionnaire customization
- Memory-optimized processing

1.2 System Requirements

- Windows 10/11
- Microsoft Excel (for data extraction)
- Sufficient disk space for participant folders

2 Getting Started

When you first launch Survey Workbench v2.0, you'll see the main window with two primary sections:

1. **Generate Participant Folder** – Creates organized folders with questionnaires
2. **Extract Data** – Reads completed questionnaires and appends to masterfile (CSV, XLS, or XLSX)

3 Generate Participant Folder

This section allows you to create standardized participant folders with multiple questionnaire types.

3.1 Step-by-Step Guide

3.1.1 Step 1: Enter Participant ID

Enter a unique identifier for the participant (e.g., "WaS3_001").

- This ID will be used in folder and file names
- Use consistent naming across all participants
- The field cannot be empty

3.1.2 Step 2: Select Target Folder

1. Click **Search** next to "Target folder PATH"
2. Choose where participant folders will be created
3. Example: `C:\Studies\WaS3\Participants`

3.1.3 Step 3: Configure Questionnaire Types

1. Enter the number of different questionnaire types needed
2. Click **Confirm** to create configuration rows

A scrollable area will appear with configuration fields for each questionnaire type.

3.1.4 Step 4: Configure Each Questionnaire

For each questionnaire type, you'll configure three parameters:

Survey Name:

- Enter the questionnaire identifier (e.g., "demographics", "nasa1", "comments")
- This name will be part of the output filename
- Use descriptive, consistent names

Template PATH:

- Click **Search** to select the PDF template file
- Example: `C:\Templates\WaS3_demographics.pdf`
- Template must be a valid PDF file

Number of copies:

- Enter how many copies of this questionnaire to create
- Default is 1
- Use multiple copies for repeated measures (e.g., 8 copies for NASA-TLX)

3.1.5 Step 5: Generate Folder

Click **Generate Participant Folder**. The system will:

1. Create a folder named with the Participant ID
2. Copy all questionnaires with standardized naming
3. Open the folder automatically

3.2 File Naming Convention

- Single copy: `{ParticipantID}_{SurveyName}.pdf`
- Multiple copies: `{ParticipantID}_{SurveyName}1.pdf`, `{ParticipantID}_{SurveyName}2.pdf`, etc.

3.3 Example Output

```
WaS3_001/
├── WaS3_001_demographics.pdf
├── WaS3_001_nasa1.pdf
├── WaS3_001_nasa2.pdf
├── WaS3_001_nasa3.pdf
├── WaS3_001_nasa4.pdf
├── WaS3_001_nasa5.pdf
├── WaS3_001_nasa6.pdf
├── WaS3_001_nasa7.pdf
├── WaS3_001_nasa8.pdf
└── WaS3_001_comments.pdf
```

4 Extract Data

This section reads completed questionnaire data and appends it to a masterfile. The system automatically detects the format (CSV, XLS, or XLSX) from your selected file and uses the appropriate method.

4.1 Prerequisites

- Completed questionnaires must have "_Extract Data.csv" files
- CSV files must be in the participant folder
- A masterfile must exist (.csv, .xls, or .xlsx format)
- The masterfile will be updated with new participant data

4.2 Step-by-Step Guide

4.2.1 Step 1: Select Source Folder

1. Click **Search** next to "Source folder PATH"
2. Choose the folder containing participant folders
3. Example: `C:\Studies\WaS3\Completed`

4.2.2 Step 2: Select Masterfile

1. Click **Search** next to "Masterfile PATH"
2. Choose your masterfile (.csv, .xls, or .xlsx)
3. The system will auto-detect the format and use the appropriate extraction method

4.2.3 Step 3: Enter Participant ID

- Enter the ID of the participant whose data you want to extract
- Must match the folder name exactly
- Case-sensitive

4.2.4 Step 4: Extract Data

Click **Extract Data to Masterfile**. The system will automatically detect your file format and proceed accordingly:

For CSV files (.csv)

1. Find all `*_Extract Data.csv` files in the participant folder
2. Read data from each CSV file
3. Append a new row to the CSV masterfile
4. Merge column headers if new fields appear
5. Save the updated file

For Excel files (.xls or .xlsx)

1. Find all `*_Extract Data.csv` files in the participant folder
2. Read data from each CSV file
3. Open the Excel masterfile
4. Find the next empty row
5. Write participant ID and all extracted data
6. Create column headers if this is the first row
7. Save the file (XLS files stay as .xls, XLSX stay as .xlsx)

4.3 Choosing Masterfile Format

Use CSV (.csv) when:

- You want a universal, plain-text format
- You plan to import data into R, Python, SPSS, or other analysis tools
- You need maximum compatibility across platforms and software
- You want human-readable, version-control-friendly files
- File size is a concern (CSV is smaller)

Use Excel (.xls or .xlsx) when:

- You want to work directly in Excel with formulas/pivot tables
- You need Excel-specific features (formatting, charts, multiple sheets)
- Your workflow is primarily in Microsoft Excel
- You're using older Excel versions (use .xls for Excel 2003 and earlier)
- You're using newer Excel versions (use .xlsx for Excel 2007+)

All formats:

- Append new participants as rows to the masterfile
- Automatically merge column headers when new fields appear
- Preserve all previous data in the masterfile
- The tool auto-detects the format – just select your file

4.4 Data Organization

- Participant ID is written in the first column
- Each CSV field gets a column named `{SurveyType}_{FieldName}`
- Example columns: `demographics_Age`, `nasa1_Mental_Demand`, `nasa1_Physical_Demand`
- Data is sorted alphabetically by column name
- The "File" column from CSVs is automatically excluded

4.4.1 Step 5: Verify Results

- A success message shows how many CSV files were processed
- Check the Excel file to verify data was written correctly

5 Configuration Management

Save and load your questionnaire configurations for repeated use.

5.1 Save Configuration

1. Set up your questionnaires in the Generate section
2. Go to **File** → **Save Configuration**
3. Enter a descriptive configuration name
4. Click **Save configuration**

5.1.1 What's Saved

- Target folder path
- Number of questionnaire types
- All questionnaire names, template paths, and copy counts
- Source folder path (for extraction)
- Excel file path (for extraction)

5.1.2 Overwriting Configurations

If a configuration with the same name exists, you'll be asked to confirm:

- Choose **Yes** to replace the old configuration
- Choose **No** to cancel

5.2 Load Configuration

1. Go to **File → Load/Delete Configuration**
2. Select a configuration from the dropdown
3. Click **Load configuration**

All saved settings will be restored to the interface.

5.3 Delete Configuration

1. Go to **File → Load/Delete Configuration**
2. Select a configuration from the dropdown
3. Click **Delete configuration**
4. Confirm the deletion

6 Troubleshooting

6.1 Common Error Messages

6.1.1 "Please enter a participant ID!"

- Make sure you've entered an ID in the Participant ID field
- The field cannot be empty

6.1.2 "Please select a target folder!"

- Click Search and choose a valid folder
- The folder must exist and be accessible

6.1.3 "Please configure questionnaires!"

- Enter a number in "Number of questionnaire types"
- Click Confirm to create configuration rows

6.1.4 "Participant folder not found"

- Verify the Source folder is correct
- Check that the Participant ID matches the folder name exactly
- Folder names are case-sensitive

6.1.5 "No Extract Data CSV files found"

- Check that questionnaires have been processed
- CSV files must end with "_Extract Data.csv"
- Verify files are in the participant folder

6.1.6 "Folder already exists. Overwrite?"

- Choose **Yes** to replace existing files
- Choose **No** to cancel and preserve existing data

6.2 Excel-Related Issues

- Ensure Excel is installed and accessible
- Close the Excel file if it's already open
- Check file permissions
- Verify the Excel file is not corrupted

6.3 Best Practices

6.3.1 Use Consistent Naming

- Use the same participant ID format across all participants
- Example: WaS3_001, WaS3_002, WaS3_003, etc.
- Avoid special characters in IDs

6.3.2 Organize Templates

- Keep all questionnaire templates in one folder
- Use descriptive filenames
- Maintain backups of template files

6.3.3 Save Configurations

- Create configurations for each study type
- Use descriptive configuration names
- Update configurations when templates change

6.3.4 Backup Data

- Regularly backup your Excel data files
- Keep copies of completed questionnaires
- Use version control for configuration files

6.3.5 Test First

- Test with a sample participant before processing real data
- Verify Excel output is formatted correctly
- Check all questionnaire templates load correctly

7 Advanced Features

7.1 Multiple Questionnaire Copies

When you need repeated measures:

1. Set "Number of copies" to the desired amount
2. Files will be numbered sequentially: `name1.pdf`, `name2.pdf`, etc.
3. Useful for: NASA-TLX repeated measures, multiple trials, time-series data

7.2 Custom Excel Sheets

The extraction looks for a sheet named "Data":

- If found, data is written to this sheet
- If not found, data is written to the first sheet
- Headers are created automatically on the first row
- Existing headers are preserved and matched

7.3 File Column Filtering

The extraction automatically skips any column named "File" from CSV data to avoid redundant path information.

8 Technical Information

8.1 Version History

8.1.1 v2.0 (February 2026)

- Dynamic questionnaire support (unlimited types)
- Individual configuration per questionnaire
- Improved data extraction algorithm
- Enhanced error handling
- Configuration save/load system
- Memory-optimized processing
- Comprehensive type hints

8.1.2 v1.2 (Previous)

- Fixed questionnaire count
- Basic data extraction
- Simple configuration

8.2 Credits

Version: 2.0
Release Date: February 2026

8.3 Technology Stack

- Python 3.13.7
- PyQt5 5.15.11 (GUI framework)
- xlwings 0.33.20 (Excel integration)
- PyInstaller 6.14.2 (Executable packaging)

9 Support and Contact

For technical support or feature requests, please refer to your organization's support channels.