# NEPS National Educational Panel Study

Starting Cohort 3: Grade 5 (SC3)

SUF Version 7.0.0

**Anonymization Procedures** 

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Bamberg, 2017

# 1 Preamble

This documentation gives an exhaustive explanation of all disclosure risk minimization techniques applied before dissemination to the Scientific Use File (SUF) of Starting Cohort (SC) 3, version 7.0.0 (doi:10.5157/NEPS:SC3:7.0.0). For a quick reference to all variables and datafiles which are affected in detail and on which level you will find the full information, please skip forward to appendix section A.1. If you have inquiries or need further information not covered in this document please feel free to contact the research data center at fdz@lifbi.de. Please note the following general remarks:

- in all tables, the anonymization suffix (\_O, \_R, \_D) was removed from the variable name to enhance readability and remove duplicates. To find a specific variable in the data file, add the corresponding suffix or use a wildcard.
- to ensure a data-consistent documentation, all tables in this document have been produced on basis of the SUF data. Variable labels in the data have been cut off at 80 characters, which inherits to this documentation.
- as additional documentation, a *Semantic Data Structure File* is available. This is the complete SUF where all cases have been removed. Feel free to use this as a first overview to the data in cases you do not have access to the real data (e.g. you are interested in data files which are available OnSite only). You are well advised to use this preparing your syntax *before* initiating your travel to our OnSite facility. You find it freely available on the documentation page to this SUF:

www.neps-data.de > Data Center > Data and Documentation > Starting Cohort
Grade 5 > Documentation

#### 1.1 Specifications

To ensure the best possible confidentiality protection of individuals and individual micro data, the National Educational Panel Study complies with strict international standards. To achieve this, a *portfolio approach*, based on the ideas of **LaneHeusMulcahy2008.20130315** has been established. This approach interlocks data security mechanism on five different levels, while the actual data modification (i.e. anonymization) is one of them. For further information, see the article by **koberg2016disclosing** Operationalizing this modification procedure, it can be abstracted to the following two criteria:

the disseminated data was transferred to so called *de facto anonymous data*. Identifiable information is coarsened or cut off and kept securely to minimize the risk of statistical disclosure.

#### 1 Preamble

• the use of data is strictly confidential and for statistical purposes only. The closed contract only grants access to members of the scientific community. This contract has a vast amount of legal stipulations, one of them being a large fine which applies for the realization of reidentification on purpose. Therefore, the disseminated data is highly protected by law and allows a more flexible range of available data.

To pick up the latter, the NEPS has made a huge effort regarding legal regulations to offer as much analysis power of data as possible. This *paradigm of information esteem* reveals the fact that conducted measures of statistical disclosure control are few. Also, if there really was a need for modification, only non-perturbative methods were used.

#### 1.2 Onion-shaped model

The NEPS grants the user three different modes of data access: (1) *OnSite*, which stands for the opportunity to use the secured infrastructure made available at the LIfBi in Bamberg, (2) *RemoteNEPS*, which is a progressive remote access technology providing a virtual desktop, and finally (3) *Download*, indicating the possibility to fetch data via a secure web portal.

These given access modes have been originated to allow anonymization routines for a subtle differentiation of information. The three resulting levels of anonymization define as follows:

- data provided OnSite is generally not further anonymized. However, even those data was rendered *de facto anonymous*, for no disclosure risk to persist. All information contained remains completely sane. Although users have to deal with limited possibilities of data access (i.e. supervised import and export of their results), they are free to work with all data available in a secure environment.
- access via RemoteNEPS is considered equivalent to OnSite, hence most of the data stays complete.
- as Download is assumed to be the most hazardous access mode<sup>1</sup>, some more anonymization techniques are done to the dataset.

Obviously this approach results in three different versions of all involved datasets. To enable a consistent structure, these data files always contain the entire set of variables; it is their content which differs through the three levels.

As normally there is no need to resign aggregated variables in the higher levels (i.e. OnSite or RemoteNEPS), those are already defined as a surplus to the original variable in the OnSiteversion. Stepping down to RemoteNEPS, the content of related variables too sensitive for this level is overwritten with an exclusive missing code – an operation which we define as *purging*. Note that system missing values are not affected, allowing the user to differ between value existence and nonexistence. This still is a valuable additional information. The same logic applies to the transition from RemoteNEPS to Download.

1 'hazardous' in terms of: the downloaded content is no longer under physical control of the LIfBi

While there is no explicit documentation to this fact, it should remain clear that this procedure accumulates, i.e. purged content under RemoteNEPS is therefore neither included in RemoteNEPS nor in Download.

This *onion-shaped model* provides both ease of (1) use of different sensitivity models (e.g. preparing an analysis using the Download dataset and conducting it afterwards using the OnSite-data) and (2) documentation, for the subject of documentation is the most sensitive level (OnSite), with RemoteNEPS and Download levels being a subset of these data.

The fourth layer *master* depicted below contains every material which is needed during data processing by the NEPS, but is not meant for the scientific community to be usable.

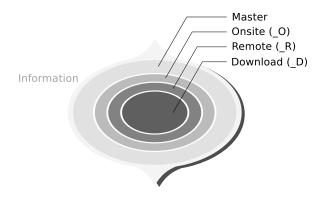


Figure 1: Onion-shaped model defining the different anonymization levels

Technically, this model realizes in a single letter suffixed to dataset and variable names. All datasets available OnSite only are marked with an additional \_O, those available via RemoteNEPS with \_R and Download files with \_D. The same procedure applies when it comes to variable differentiation. A variable which is available unaltered OnSite only is suffixed with \_O. In RemoteNEPS-access or Download, this variable is still present but purged. If there is an alternate version (e.g. with coarsened content) for RemoteNEPS (suffix \_R) or Download (suffix \_D), those can be used. As said before, these are already integrated in the OnSite version. See section 3 for some examples (especially for a practical explanation what is meant by *purging* here).

# 2 Conducted measures

Keeping the usability and the paradigm of information esteem in mind, only very few alterations are actually done to the dataset. Please note that all information is still available somewhere and that only RemoteNEPS and (mainly) the Download version are constraint in this matter. In fact, in this SUF, only 313 out of 5553 variables are modified in some way.

The following table gives an explanatory overview of all measures conducted. The remainder of this section gives a more detailed description of those topics.

**Table 1:** Availability of sensitive data

| Topic                 | OnSite     | RemoteNEPS | Download   |
|-----------------------|------------|------------|------------|
| String variables      | anonymized | n/a        | n/a        |
| $International^1$     | full data  | full data  | collapsed  |
| Regional (National)   | restricted | restricted | restricted |
| Institutional context | full data  | anonymized | n/a        |
| Macro indicators      | accessible | n/a        | n/a        |
| Others                | full data  | full data  | aggregated |

 $<sup>^{1}\,</sup>$  international geographical information (e.g., nation states, national languages)

#### 2.1 String variables

All variables containing actual text and whose type is therefore string are purged in the RemoteNEPS version. The information remains accessible OnSite. However, you should be aware that in the majority of cases, text entries have been recoded into derived variables (usually suffixed with  $_g1$ ,  $_g2$ , etc.), which contain the information collected. Those variables are available in all three levels, only the actual text entry is available OnSite only. The text entries have been reviewed by staff to ensure that absolutely no reidentificational material is included. To indicate the availability of those variables OnSite only, the variable names have been suffixed with an additional  $_0$ .

**Table 2:** All string variables; those are only available onsite

| file          | variable | label  |
|---------------|----------|--|
|               |          |  |
| pCourseGerman | ed0015x  | Spelling knowledge - other                                   |
| pCourseGerman | ed0016h  | Strategies - other   |
| pInstitution  | h22131x  | School: all-day school programs: other, text 1               |
| pInstitution  | h22131y  | School: all-day school programs: other, text 2               |
| pInstitution  | h22131z  | School: all-day school programs: other, text 3               |
| pInstitution  | h22202t  | School: quality: other, text                                 |
| pInstitution  | h227011  | School: full-time teachers school subject: other school sub- |
| •             |          | jects, text1   |
| pInstitution  | h227012  | School: full-time teachers school subject: other school sub- |
| •             |          | jects, text2   |
| pInstitution  | h227013  | School: full-time teachers school subject: other school sub- |
| •             |          | jects, text3   |

**Table 2:** (continued)

| file         | variable | label  |
|--------------|----------|--|
| pInstitution | h229003  | School: approach: educational, text                              |
| pInstitution | h229005  | School: approach: promotion, text                                |
| pInstitution | h229007  | School: approach: integration, text                              |
| pInstitution | h229009  | School: approach: other, text                                    |
| pInstitution | h22901t  | School: profile: other, text                                     |
| pInstitution | h41700a  | Other remedial measures, other                                   |
| pInstitution | h41702a  | Parent training programs, migration, other                       |
| pInstitution | h41704a  | Teacher training programs, migration, other                      |
| pInstitution | hd0041b  | Other function in school administration, specifically:           |
| pParent      | p19020j  | Special educational needs OPEN                                   |
| pParent      | p26210t  | Parents: tutoring, other subject (open)                          |
| pParent      | p296402  | Wish: What vocation should TC learn                              |
| pParent      | p401001  | Immigration status other   |
| pParent      | p731803  | Highest educational qualification of respondent type open        |
| pParent      | p731814  | Vocational qualification respondent (open)                       |
| pParent      | p731817  | Type tertiary qualification respondent (open)                    |
| pParent      | p731853  | Highest educational qualification partner type open              |
| pParent      | p731864  | Vocational degree partner (open)                                 |
| pParent      | p731867  | Type tertiary qualification partner (open)                       |
| pTarget      | t22260t  | Student: School involvement: Other, text                         |
| pTarget      | t261201  | Student: internship duration                                     |
| pTarget      | t26212a  | Student: Subject 1   |
| pTarget      | t26212b  | Student: Subject 2   |
| pTarget      | t26212c  | Student: Subject 3   |
| pTarget      | t262400  | Student: Content of part-time job                                |
| pTarget      | t268111  | Student: tutoring location somewhere else, text                  |
| pTarget      | t27111t  | Courses outside school: other courses, open                      |
| pTarget      | t27111u  | Student: Courses outside of school: Other courses: Text, what    |
| pTarget      | t27111v  | Student: Courses outside of school: Music school lessons, text   |
| pTarget      | t27111w  | Student: Courses outside of school: Volkshochschule course, text |
| pTarget      | t27111x  | Student: Courses outside of school: Youth art school course,     |
|              |          | text   |
| pTarget      | t27270h  | Student: Participation organization/group: other, text           |
| pTarget      | t31060a  | Idealistic vocational aspirations: preferred choice of career    |
| pTarget      | t31160a  | Realistic vocational aspirations: preferred choice of career     |
| pTarget      | t34002f  | Frequency reading (genre): namely                                |
| pTarget      | t526012  | Place warm meal: other place                                     |
| pTarget      | td0021x  | Favorite subject   |
| pTarget      | tf00070  | first job wish   |
| pTarget      | tf0013b  | Second desires profession indication                             |
| pTarget      | tf0021b  | vocational training  |
| pTarget      | tf00260  | Application, occupation 1  |
| pTarget      | tf0029b  | Application vocation 2   |

**Table 2:** (continued)

| file           | variable | label                 |
|----------------|----------|-----------------------|
| spParentGap    | ps29102  | Other activity        |
| spParentSchool | p723090  | Type of school (open) |

#### 2.2 International: countries, languages, and nationalities

All information corresponding to international localization, nationality or languages is completely available only OnSite or via RemoteNEPS. Variables comprised in the Download SUF are aggregated to the binary information German/non-German. Please note that this variable does not necessarily has the same root of the variable name as the affected variable (e.g. if it is part of the instrument and not generated during the anonymization process). Look in the vicinity of the documented variable to find it. Also, see section 3.3.

Table 3: All variables which are affected by country/language/nationality aggregation

| file    | variable     | label  |
|---------|--------------|--|
| D       | 20701-       | D. ::::  |
| pParent | p32601a      | Position generator: country nurse or male nurse        |
| pParent | p32601b      | Position generator: country engineer                   |
| pParent | p32601c      | Position generator: country warehouse/transport worker |
| pParent | p32601d      | Position generator: country social worker              |
| pParent | p32601e      | Position generator: country sales clerk                |
| pParent | p32601f      | Position generator: country police officer             |
| pParent | p32601g      | Position generator: country doctor                     |
| pParent | p32601h      | Position generator: country banker                     |
| pParent | p32601k      | Position generator: country car mechanic               |
| pParent | p32601l      | Position generator: country legal practitioner         |
| pParent | p32601m      | Position generator: country optician                   |
| pParent | p32601n      | Position generator: country translator                 |
| pParent | p32601o      | Position generator: country teacher at elementary      |
|         |              | school, Hauptschule or Real                            |
| pParent | p400010_g1   | Respondent's country of birth                          |
| pParent | p400010_g2   | Respondent's country of birth (aggregated)             |
| pParent | p400070_g1   | Respondent's mother's country of birth                 |
| pParent | p400070_g2   | Country of birth of respondent's mother (aggregated)   |
| pParent | p400090_g1   | Respondent's father's country of birth                 |
| pParent | p400090_g2   | Country of birth of respondent's father (aggregated)   |
| pParent | p400500_g3   | group of origin  |
| pParent | p400500_g3v1 | Group of origin  |
| pParent | p401150_g2   | Respondent's nationality not German (aggregated)       |

**Table 3:** (continued)

| rable 5: (continuea) |              |   |
|----------------------|--------------|---|
| file                 | variable     | label   |
| pParent              | p403010_g1   | Partner's country of birth                            |
| pParent              | p403010_g2   | Partner's country of birth (aggregated)               |
| pParent              | p403070_g1   | Partner's mother's country of birth                   |
| pParent              | p403070_g2   | Country of birth of partner's mother (aggregated)     |
| pParent              | p403090_g1   | Partner's father's country of birth                   |
| pParent              | p403090_g2   | Country of birth of partner's father (aggregated)     |
| pParent              | p404050_g2   | Other nationality partner (aggregated)                |
| pParent              | p406010_g1   | Country of birth target child                         |
| pParent              | p406010_g2   | Target child's country of birth (aggregated)          |
| pParent              | p407050_g2   | Target child's nationality (aggregated)               |
| pParent              | p407060_g2   | Target child's second nationality (aggregated)        |
| pParent              | p731804_g1   | Highest educational qualification of respondent       |
|                      |              | abroad  |
| pParent              | p731804_g2   | Country of respondent's highest educational quali-    |
|                      |              | fication (aggregated)                                 |
| pParent              | p731823_g1   | Country of vocational qualification (additional re-   |
|                      |              | sponse)   |
| pParent              | p731823_g2   | Country of professional qualification (additional re- |
|                      |              | sponse, aggregated)                                   |
| pParent              | p731854_g1   | Country of partner's highest school-leaving qualifi-  |
|                      |              | cation  |
| pParent              | p731854_g2   | Country of highest educational qualification part-    |
|                      |              | ner (aggregated)                                      |
| pParent              | p731873_g1   | Country of vocational qualification, partner, (addi-  |
|                      |              | tional response)                                      |
| pParent              | p731873_g2   | Country of partner's professional qualification (ad-  |
|                      |              | ditional response, aggrega                            |
| pTarget              | t400000_g1   | Birth country   |
| pTarget              | t400000_g2   | Country of birth (aggregated)                         |
| pTarget<br>_         | t400070_g1   | Mother: Country of birth                              |
| pTarget<br>_         | t400070_g2   | Mother: Country of birth (aggregated)                 |
| pTarget<br>_         | t400090_g1   | Father: Country of birth                              |
| pTarget<br>_         | t400090_g2   | Father: Country of birth (aggregated)                 |
| pTarget<br>_         | t400220_g1   | Country of birth of your mother's mother              |
| pTarget<br>_         | t400220_g2   | Mother's mother: Country of birth (aggregated)        |
| pTarget              | t400240_g1   | Country of birth of your mother's father              |
| pTarget              | t400240_g2   | Mother's father: Country of birth (aggregated)        |
| pTarget              | t400260_g1   | Country of birth of your father's mother              |
| pTarget              | t400260_g2   | Father's mother: Country of birth (aggregated)        |
| pTarget              | t400280_g1   | Country of birth of your father's father              |
| pTarget              | t400280_g2   | Father's father: Country of birth (aggregated)        |
| pTarget              | t400500_g3   | Group of origin                                       |
| pTarget              | t400500_g3v1 | Group of origin                                       |
| spParentSchool       | p723060_g1   | Country of school                                     |

**Table 3:** (continued)

| rable 3. (commuec | */         |  |
|-------------------|------------|--|
| file              | variable   | label  |
| spParentSchool    | p723060_g2 | Country of school (aggregated)                       |
| ParentMethods     | px80204    | Interview: interview language (realized case)        |
| TargetMethods     | tx80204    | Interview: Interview language (realized case)        |
| pEducator         | e41100a_g2 | Mother tongue (response 1, ISO 639.2)                |
| pEducator         | e41100a_g3 | Mother tongue (response 2, ISO 639.2)                |
| pEducator         | e41100a_g4 | Mother tongue (response 3, ISO 639.2)                |
| pEducator         | e41100a_g5 | Mother tongue (response 4, ISO 639.2)                |
| pParent           | p410000_g1 | Child's language of origin (ISO 639.2)               |
| pParent           | p410000_g2 | Child's language of origin (aggregated)              |
| pParent           | p410002_g1 | Child's other language of origin (ISO 639.2)         |
| pParent           | p410002_g2 | Child's other language of origin (aggregated)        |
| pParent           | p412001_g1 | Interaction language household, detailed (ISO 639.2) |
| pParent           | p412001_g2 | Interactive language household detailed (aggre-      |
|                   |            | gated)   |
| pParent           | p413000_g1 | Respondent's language of origin (ISO 639.2)          |
| pParent           | p413000_g2 | Respondent's language of origin (aggregated)         |
| pParent           | p413002_g1 | Respondent's additional language of origin (ISO      |
|                   |            | 639.2)   |
| pParent           | p413002_g2 | Respondent's other language of origin (aggregated)   |
| pParent           | p414000_g1 | Partner's language of origin (ISO 639.2)             |
| pParent           | p414000_g2 | Partner's language of origin (aggregated)            |
| pParent           | p414002_g1 | Partner's additional language of origin (ISO 639.2)  |
| pParent           | p414002_g2 | Partner's other language of origin (aggregated)      |
| pParent           | p414100_g1 | Recent partner's language of origin (ISO 639.2)      |
| pParent           | p414100_g2 | Recent partner's language of origin (aggregated)     |
| pParent           | p414102_g1 | Recent partner's other language of origin (ISO       |
|                   |            | 639.2)   |
| pParent           | p414102_g2 | Recent partner's other language of origin (aggre-    |
|                   |            | gated)   |
| pTarget           | t41000a_g2 | Mother tongue (1st alternative, ISO 639.2)           |
| pTarget           | t41000a_g3 | Mother tongue (2nd alternative, ISO 639.2)           |
| pTarget           | t41000a_g4 | Mother tongue (3rd alternative, ISO 639.2)           |
| pTarget           | t41000a_g5 | Mother tongue (4th alternative, ISO 639.2)           |
| pTarget           | t410010_g2 | Second language (1st alternative, ISO 639.2)         |
| pTarget           | t410010_g3 | Second language (2nd alternative, ISO 639.2)         |
| pTarget           | t410010_g4 | Second language (3rd alternative, ISO 639.2)         |
| pTarget           | t410010_g5 | Second language (4th alternative, ISO 639.2)         |
| pTarget           | t41010a_g2 | Mother: Mother tongue (1st alternative, ISO 639.2)   |
| pTarget           | t41010a_g3 | Mother: Mother tongue (2nd alternative, ISO 639.2)   |
| pTarget<br>_      | t41010a_g4 | Mother: Mother tongue (3rd alternative, ISO 639.2)   |
| pTarget<br>_      | t41010a_g5 | Mother: Mother tongue (4th alternative, ISO 639.2)   |
| pTarget<br>_      | t41012a_g2 | Father: Mother tongue (1st alternative, ISO 639.2)   |
| pTarget           | t41012a_g3 | Father: Mother tongue (2nd alternative, ISO 639.2)   |
| pTarget           | t41012a_g4 | Father: Mother tongue (3rd alternative, ISO 639.2)   |
|                   |            |  |

Table 3: (continued)

| file    | variable   | label  |
|---------|------------|--|
| pTarget | t41012a_g5 | Father: Mother tongue (4th alternative, ISO 639.2) |
| pParent | p401150_g1 | Citizenship respondent not German                  |
| pParent | p404050_g1 | Other citizenship partner                          |
| pParent | p407050_g1 | Citizenship of the target child                    |
| pParent | p407060_g1 | Second citizenship of the target child             |
| pTarget | t40115a_g2 | Nationality (response 1; coded)                    |
| pTarget | t40115a_g3 | Nationality (response 2; coded)                    |
| pTarget | t40115a_g4 | Nationality (response 3; coded)                    |

#### 2.3 Regional localization

For all variables which register a regional position – such as places of birth, work, school, or residence – the following variables have been generated (if possible):

- an indicator for West Germany and East Germany (including Berlin)
- the federal state for this location.

As NEPS data which has been surveyed in institutional context enjoys special focus in this matter, federal states are only available in RemoteNEPS. When using data collected in connection with schools or higher education institutions, it is not allowed to use Federal-State-related information directly or indirectly contained in the data for analyses aiming at a direct Federal State comparison, direct conclusions to be drawn about a Federal State, or a reconstruction of the concrete Federal State affiliation of persons, households, and institutions. Please see the Data Use Agreement for further information about this topic. Regional localization below this level is not directly available. If you have need to merge data using a regional key below those levels, please contact the LIfBi RDC (fdz@lifbi.de), which may deal with this matter for you.

Table 4: All regional variables which are only available in RemoteNEPS

| file  | variable   | label   |
|---|--|---|
| CohortProfile<br>Weights                        | tx80109_g2   | Sample: Federal state school implicit stratum 2 (federal states of institution)   |
| Weights   | stratum_imp2<br>stratum_imp3   | implicit stratum 2 (regional classification of institu-<br>tion)  |
| Weights pEducator pEducator pEducator pEducator | stratum_imp4<br>e537110_g2<br>e537110_g3<br>e537170_g2<br>e537170_g3 | implicit stratum 4 (organizing institution) Place of study teaching post (Federal State) Place of study teaching post (administrative district) Place: passed the examination (Federal State) Place: passed the examination (administrative district) |

Table 4: (continued)

| file  | variable  | label   |
|---|---|---|
| pParent<br>pTarget<br>spParentSchool<br>spSibling | p751001_g2<br>tx44401_g2<br>p723030_g2<br>p723050 | Place of Residence (Federal State) Place of school (federal state) Municipality of school (federal state) State of school |

#### 2.4 Institutional characteristics

In this Starting Cohort, also information about institutions is available. A special focus of anonymization was directed to protection of institutional data, i.e. information about kindergarten, schools, and universities, but also educators and teachers. To minimize the risk of reidentification, this data is only available in RemoteNEPS. This includes the complete datafile(s) pInstitution,

but may also affect basic structural details about the group or class (e.g. size of class) in other datafiles. Furthermore, personal information about educators and teachers is treated more securely. You will find detailed information about these subjects from RemoteNEPS onward. Refer to section 2.6 to see the affected variables.

#### 2.5 Macro indicators

Additional information including structural topography and macroeconomic measures was collected. You find those available OnSite only. The following data is available:

- Microm data, describing the surrounding of the targets residence
- Microm data, describing the surrounding of the school
- RegioInfas (infas geodaten) data, describing the surrounding of the targets residence
- RegioInfas data, describing the surrounding of the school

#### 2.6 Other variables

All other variables affected by anonymization and not classifiable in the previous groups are listed below. In the first table (table 5), you find all variables which were aggregated in the Download-SUF. An additional table below each entry displays the values of the variable, both as found in RemoteNEPS (if table column is empty, the variable is numeric and does not have a value label scheme) and in Download.

The second table (table 6) contains all variables which are not aggregated, but purged completely in the Download-version, that is, there is no aggregated version.

**Table 5:** Other variables which were aggregated in the Download-SUF (aggregation is also stated)

#### [file] variable: label

[CohortProfile] tx80505: List of children / pupils: Special educational needs target child (aggregated)

| RemoteNEPS  |     | Download                     |
|---|-----|------------------------------|
| No special educational needs  | 1   | No special educational needs |
| Special educational needs with priority reading                             | 2   | Special educational needs    |
| Special educational needs with priority language                            | 3   |                              |
| Special educational needs with priority emotional and social development    | 4   |                              |
| Special educational needs with priority autism                              | 5   |                              |
| Special educational needs with other priority                               | 6   |                              |
| Special educational needs with priority learning/language                   | 23  |                              |
| Special educational needs with priority learning/e-<br>motional development | 24  |                              |
| Special educational needs with priority learning/autism                     | 25  |                              |
| Special educational needs with priority learning/other                      | 26  |                              |
| Special educational needs with priority emotional social development/autism | 45  |                              |
| Special needs with focus on emotional social development/other              | 46  |                              |
| not administered  | 97  |                              |
| Special educ.needs priority learning/language/emotional social development  | 234 |                              |

[pCourseClass] e227400\_g1: Class: Number of students, total (coarsed)

| RemoteNEPS |   | Download    |  |
|------------|---|-------------|--|
|            | 1 | Below 10    |  |
|            | 2 | 10 to 14    |  |
|            | 3 | 15 to 19    |  |
|            | 4 | 20 to 24    |  |
|            | 5 | 25 to 29    |  |
|            | 6 | 30 to 34    |  |
|            | 7 | 35 and more |  |

[pCourseClass] e229400: Class: Facilities: Classroom size (aggregated)

| RemoteNEPS |   | Download    |
|------------|---|-------------|
|            | 1 | under 30    |
|            | 2 | 30 to 39    |
|            | 3 | 40 to 49    |
|            | 4 | 50 to 59    |
|            | 5 | 60 and more |

#### Table 5: (continued)

#### [file] variable: label

[pCourseGerman] ed0001h: Amount of German lessons (categorized)

| RemoteNEPS |   | Download   |
|------------|---|------------|
|            | 1 | to 4       |
|            | 2 | 5          |
|            | 3 | 6 and more |

[pCourseGerman] ed0001m: German lessons (duration in min per lessons, categorized)

| RemoteNEPS |   | Download |
|------------|---|----------|
|            | 1 | 45       |
|            | 2 | Other    |

[pCourseGerman] ed0002h: Remedial teaching (number of lessons, categorized)

| RemoteNEPS |   | Download  |
|------------|---|-----------|
|            | 1 | below 2   |
|            | 2 | 2 or more |

[pCourseMath] ed00035: Remedial teaching (number of lessons, categorized)

| RemoteNEPS |   | Download  |
|------------|---|-----------|
|            | 1 | below 2   |
|            | 2 | 2 or more |

[pCourseMath] ed0025h: Amount of Math lessons (categorized)

| RemoteNEPS |   | Download   |
|------------|---|------------|
|            | 1 | to 4       |
|            | 2 | 5          |
|            | 3 | 6 and more |

[pCourseMath] ed0025m: Math lessons (duration in minutes per lessons, categorized)

| RemoteNEPS |   | Download |
|------------|---|----------|
|            | 1 | 45       |
|            | 2 | Other    |

[pEducator] e229820: Work in occupation (years, categorized)

| RemoteNEPS |   | Download          |
|------------|---|-------------------|
|            | 1 | 0 up to below 5   |
|            | 2 | 5 up to below 10  |
|            | 3 | 10 up to below 15 |
|            | 4 | 15 up to below 20 |
|            | 5 | 20 up to below 25 |
|            | 6 | 25 up to below 30 |
|            | 7 | 30 up to below 35 |
|            | 8 | 35 and more       |

#### Table 5: (continued)

#### [file] variable: label

[pEducator] e229821: Time in occupation at school (years, categorized)

| RemoteNEPS |   | Download          |
|------------|---|-------------------|
|            | 1 | 0 up to below 5   |
|            | 2 | 5 up to below 10  |
|            | 3 | 10 up to below 15 |
|            | 4 | 15 up to below 20 |
|            | 5 | 20 up to below 25 |
|            | 6 | 25 up to below 30 |
|            | 7 | 30 up to below 35 |
|            | 8 | 35 and more       |

[pEducator] e536020: Age at choice of occupation (categorized)

| RemoteNEPS |    | Download     |  |
|------------|----|--------------|--|
|            | 30 | 30 and older |  |

[pEducator] e53702y: Year of college admission qualification (categorized)

| RemoteNEPS |   | Download    |
|------------|---|-------------|
|            | 1 | Before 1970 |
|            | 2 | 1970-1979   |
|            | 3 | 1980-1989   |
|            | 4 | 1990-1999   |
|            | 5 | after 1999  |

[pEducator] e53710y: Year of study start teacher course (kategorisiert)

| RemoteNEPS |   | Download    |
|------------|---|-------------|
|            | 1 | Before 1970 |
|            | 2 | 1970-1979   |
|            | 3 | 1980-1989   |
|            | 4 | 1990-1999   |
|            | 5 | after 1999  |

[pEducator] e537150: Year of passing the examination (categorized)

| RemoteNEPS |   | Download    |  |
|------------|---|-------------|--|
|            | 1 | Before 1970 |  |
|            | 2 | 1970-1979   |  |
|            | 3 | 1980-1989   |  |
|            | 4 | 1990-1999   |  |
|            | 5 | after 1999  |  |

[pEducator] e76212y: Year of birth (categorized)

| RemoteNEPS |   | Download    |  |
|------------|---|-------------|--|
|            | 1 | before 1950 |  |
|            | 2 | 1950-1959   |  |
|            | 3 | 1960-1969   |  |
|            | 4 | 1970-1979   |  |
|            | 5 | after 1979  |  |

#### **Table 5:** (continued)

#### [file] variable: label

 $\ensuremath{[\mathsf{pParent}]}$  p727001: Recommendation secondary school or course of education, which ones? (coarsened)

| RemoteNEPS   |            | Download   |
|--|------------|--|
| Hauptschule [school for basic secondary education]   | 1          | Hauptschule [basic secondary school]   |
| Realschule [intermediate secondary school]   | 2          | , ,  |
| Gymnasium [type of school leading to upper sec-  | 3          | Realschule [intermediate secondary school]   |
| , , , , ,  | 3          | Gymnasium [upper secondary school]   |
| ondary education and Abitur]   | 4          | Intermeted Commetedade [horizoned intermediate   |
| Integrated Gesamtschule [basic and intermediate  | 4          | Integrated Gesamtschule [basic and intermediate  |
| secondary school, in some states also elementary   |            | secondary school]  |
| and upper] with inclusion  | _          | Table 11 and the late of the l |
| Verbundene Haupt- und Realschule [type of school   | 5          | Joint Haupt- and Realschule [basic and intermediate  |
| in Berlin, Hesse, Mecklenburg-West Pomerania   |            | secondary school]  |
| and Lower Saxony offering basic and intermedi-   |            |  |
| ate secondary education] «also Gemeinschaftss-<br>chule, Oberschule, district school, extended Re- |            |  |
| alschule, Realschule plus, Werkrealschule, Mittel-   |            |  |
| stufenschule»  |            |  |
| Mittelschule [type of school offering basic and in-  | 6          | Mittelschule/Regelschule/Sekundarschule/Regionale  |
| termediate secondary education in Saxony] (Sax-  | U          | Schule [basic and intermediate secondary school]   |
| ony/Bavaria)   |            | Schule [basic and intermediate secondary school]   |
| Regelschule [basic and intermediate secondary  | 7          |  |
| school in Thuringia] (Thuringia)   | ,          |  |
| Regionale Schule [type of school in Mecklenburg-   | 8          |  |
| West Pomerania offering basic and intermediate   | Ū          |  |
| secondary education] (Rhineland Palatinate)  |            |  |
| Sekundarschule [type of school in Bremen and   | 9          |  |
| Saxony-Anhalt offering basic and intermediate sec-   |            |  |
| ondary education] (Bremen, NRW)  |            |  |
| Remedial level (Hesse)   | 10         |  |
| Special school   | 11         | Special needs school   |
| Orientation stage [first two years of secondary ed-  | 12         | Orientation stage  |
| ucation]   | - <b>-</b> |  |
| School for highly gifted students  | 13         | School for highly gifted students  |
| Gemeinschaftsschule [type of Gesamtschule in   | 14         | <del></del>  |
| Schleswig-Holstein] (NRW)  |            |  |
| 0 1 7  |            |  |

#### **Table 5:** (continued)

#### [file] variable: label

 $\ensuremath{[pParent]}$  p727002: Recommendation secondary school or course of education, further ones? (coarse...

| RemoteNEPS   |    | Download   |
|--|----|--|
| Hauptschule [school for basic secondary education]   | 1  | Hauptschule [basic secondary school]   |
| Realschule [intermediate secondary school]   | 2  | Realschule [intermediate secondary school]   |
| Gymnasium [type of school leading to upper sec-  | 3  | Gymnasium [upper secondary school]   |
| ondary education and Abitur]   |    |  |
| Integrated Gesamtschule [basic and intermediate  | 4  | Integrated Gesamtschule [basic and intermediate  |
| secondary school, in some states also elementary   |    | secondary school]  |
| and upper] with inclusion  |    |  |
| Verbundene Haupt- und Realschule [type of school   | 5  | Joint Haupt- and Realschule [basic and intermediate  |
| in Berlin, Hesse, Mecklenburg-West Pomerania   |    | secondary school]  |
| and Lower Saxony offering basic and intermedi-   |    |  |
| ate secondary education] «also Gemeinschaftss-   |    |  |
| chule, Oberschule, district school, extended Re-   |    |  |
| alschule, Realschule plus, Werkrealschule, Mittel-   |    |  |
| stufenschule»  |    |  |
| Mittelschule [type of school offering basic and in-  | 6  | Mittelschule/Regelschule/Sekundarschule/Regionale  |
| termediate secondary education in Saxony] (Sax-  |    | Schule [basic and intermediate secondary school]   |
| ony/Bavaria)   | _  |  |
| Regelschule [basic and intermediate secondary  | 7  |  |
| school in Thuringia] (Thuringia)   |    |  |
| Regionale Schule [type of school in Mecklenburg-   | 8  |  |
| West Pomerania offering basic and intermediate secondary education] (Rhineland Palatinate) |    |  |
| Sekundarschule [type of school in Bremen and   | 9  |  |
| Saxony-Anhalt offering basic and intermediate sec-   | 9  |  |
| ondary education] (Bremen, NRW)  |    |  |
| Remedial level (Hesse)   | 10 |  |
| Special school   | 11 | Special needs school   |
| Orientation stage [first two years of secondary ed-  | 12 | Orientation stage  |
| ucation]   |    | one man on the contract of the |
| School for highly gifted students  | 13 | School for highly gifted students  |
| Gemeinschaftsschule [type of Gesamtschule in   | 14 |  |
| Schleswig-Holstein] (NRW)  |    |  |

#### [pParent] p731911: Number of employees respondent (aggregated)

| RemoteNEPS               |    | Download           |
|--------------------------|----|--------------------|
| 1 to less than 5         | 1  | 1 to less than 5   |
| 5 to less than 10        | 2  | 5 to less than 10  |
| 10 to less than 20       | 3  | 10 to less than 20 |
| 20 to less than 50       | 4  | 20 and more        |
| 50 to less than 100      | 5  |                    |
| 100 to less than 200     | 6  |                    |
| 200 to less than 250     | 7  |                    |
| 250 to less than 500     | 8  |                    |
| 500 to less than 1.000   | 9  |                    |
| 1,000 to less than 2.000 | 10 |                    |
| 2,000 and more           | 11 |                    |

**Table 5:** (continued)

#### [file] variable: label

[pParent] p731961: Number of employees partner (categorized)

| RemoteNEPS               |    | Download           |
|--------------------------|----|--------------------|
| 1 to less than 5         | 1  | 1 to less than 5   |
| 5 to less than 10        | 2  | 5 to less than 10  |
| 10 to less than 20       | 3  | 10 to less than 20 |
| 20 to less than 50       | 4  | 20 and more        |
| 50 to less than 100      | 5  |                    |
| 100 to less than 200     | 6  |                    |
| 200 to less than 250     | 7  |                    |
| 250 to less than 500     | 8  |                    |
| 500 to less than 1.000   | 9  |                    |
| 1,000 to less than 2.000 | 10 |                    |
| 2,000 and more           | 11 |                    |

**Table 6:** Other variables which were purged in the Download-SUF

| file         | variable | label   |
|--------------|----------|---|
| Weights      | tx80113  | Total number of classes in the 8th grade (according to the Federal Statistica |
| Weights      | tx80114  | Total number of classes in the 8th grade (according to the Federal Statistica |
| pCourseClass | e190011  | Class: Amount of students with special needs                                  |
| pCourseClass | e199001  | Class: amount of students with special needs learning                         |
| pCourseClass | e199002  | Class: amount of students with special needs language                         |
| pCourseClass | e199003  | Class: amount of students with special needs physical/motor development       |
| pCourseClass | e199004  | Class: amount of students with special needs emotional/social development     |
| pCourseClass | e199005  | Class: amount of students with special needs mental development               |
| pCourseClass | e199006  | Class: amount of students with special needs sight                            |
| pCourseClass | e199007  | Class: amount of students with special needs hearing                          |
| pCourseClass | e199008  | Class: amount of students with special needs autism                           |
| pCourseClass | e227400  | Class: Number of female students  |
| pCourseClass | e227401  | Class: Number of male students  |

Table 6: (continued)

| file         | variable   | label   |
|--------------|------------|---|
| pCourseClass | e451000    | Day care facility: Amount of students with migration background       |
| pCourseClass | e79201a    | Class: proportion class affiliation - low class                       |
| pCourseClass | e79201b    | Class: proportion class affiliation - middle class                    |
| pCourseClass | e79201c    | Class: proportion class affiliation - upper class                     |
| pCourseClass | e79202a    | Class: proportion of parents with a higher education degree           |
| pEducator    | e537030    | Federal state higher education entrance qualification (Federal state) |
| pEducator    | e537110_g4 | Place of study teaching post (county, as of 2013)                     |
| pEducator    | e537170_g4 | Place: passed the examination (county, as of 2013)                    |
| pEducator    | e537200    | Federal state second state examination (Federal state)                |
| pEducator    | e76212m    | Month of birth  |
| pInstitution | h76612m    | Month of birth  |
| pParent      | p435030_g1 | Religion and religiosity: other religious community                   |
| pTarget      | t435030_g1 | Religion and religiosity: other religious community                   |
| pTarget      | t43504a_g1 | Religion or denomination (specific)                                   |

The following examples compare variables from some selected topics. On the left side, you see these variables as they can be found in the RemoteNEPS-SUF (i.e., this is the variant of the variable which contains the full information). On the right side, you find the same variables, but from the Download-version of the SUF, that is, the aggregated or purged variant of the variable. This illustrates the anonymization applied.

#### 3.1 Number of employees

The first example is a variable collected during the interview of Starting Cohort 6 (Adults). The question further investigates the occupational periphery of employers, while here, this employer is the mother of the respondent. On the left, you see the complete information as found in the RemoteNEPS-SUF. This variable is collected using seven classes, where the last four are sparsely filled (variable t731406\_R, table on the lower left). Because of this, those four

codes have been recoded into one category (»20 and more«) and a new variable is generated (t731406\_D, upper left). In the Download-SUF, you find this aggregated variable unaltered (upper right). The variable t731406\_R rich in content was purged, though. You see that all meaningful codes have been recoded to »-53 Anonymized«. Note that the missing code »-54 Missing by design« is transported to the Download-SUF unmodified, so you already can derive the actual statistical power of this variable.

| Remote   | NEPS  | Download   |  |  |
|--|---|--|--|--|
| SC6_pTarget_R_5-1-0.dta (NEPS SUF, SC6 5.1.0 (remote); d t731406_D Number of mother's  | employees (categorized)   | SC6_pTarget_D_5-1-0.dta (NEPS SUF, SC6 5.1.0 (download); t731406_D Number of mother's  | employees (categorized)                    |  |
|  | Freq.   |  | Freq.                                      |  |
| Valid -98 Don't know   -97 Refused   -54 Missing by design   0 none   1 1 to 4   2 5 to 9   3 10 to 19   4 20 and more   Total   Missing .   Total   Total   Total   Total   Total   Total   Total | 1 36700 423 330 64 22 28 37575 15982 53557                          | Valid -98 Don't know   -97 Refused   -54 Missing by design   0 none   1 1 to 4   2 5 to 9   3 10 to 19   4 20 and more   Total   Missing . Total | 1 36700 423 330 64 22 28 37575 15982 53557 |  |
|  | Freq.   |  | Freq.                                      |  |
|  |   |  |  |  |
| Valid -98 Don't know   -97 Refused   -54 Missing by design   0 None   1 1 to 4   2 5 to 9   3 10 to 19   4 20 to 49   5 50 to 99   6 100 to 199   7 200 to 249   Total                             | 7<br>1<br>36700<br>423<br>330<br>64<br>22<br>21<br>3<br>3<br>1<br>1 | Valid -54 Missing by design   -53 Anonymized   Total   Missing .   Total   | 875<br>37575<br>15982<br>53557             |  |

#### 3.2 Countries (aggregated list)

To illustrate the anonymization of countries, first have a look at this variable from Starting Cohort 6 (Adults). The information (\*\*respondent's country of birth\*\*) was surveyed during the interview. The collected information was recoded during data processing to different derived variables. The first of those is variable t405010\_g1R, which contains the complete list of countries (lower left, output is shortened to enhance readability). Also, a second variable t405010\_g2 was generated, using a more coarse list. This is helpful if some information was collected, but it is too inaccurate to identify the country (e.g., if someone states he was born in North America, you do not know if he meant U.S. or Canada). This second variable is trans-

ported to the Download-SUF unaltered (upper right), which means it in some way represents the anonymized version. The first variable t405010\_g1R with the full information is purged in the Download-SUF.

| RemoteNEPS |  |  |       | Down   | nload                   |  |
|------------|--|--|-------|--|-------------------------|--|
|            |  |  |       |  |                         |  |
|            | get_R_5-1-0.dta<br>F, SC6 5.1.0 (remote); doi:10.5157/NEPS:SC  | 6:5.1.0)   |       | rget_D_5-1-0.dta<br>UF, SC6 5.1.0 (download)   | ; doi:10.5157/NEPS:S    | 26:5.1.0)  |
|            | g2 Country of birthplace (categorized)   |  |       | _g2 Country of birthp  |                         |  |
|            | !  | Freq.  |       |  |                         | Freq.  |
|            | -97 Refused -54 Missing by design -20 Foreign, but not codeable 1 Germany 2 Italy 3 Poland 4 Romania 5 Turkey 6 Former Yugoslavia 7 Former Soviet Union 8 Central and South America, Caribbean 9 North America 10 Other America 11 Other Africa 12 Other Africa 14 Other Asia 15 Other Central and Eastern Europe 16 Other Southern Europe 17 Other Southern Europe 18 Other Central and Eastern Europe 19 Other Central and Eastern Europe 10 Other Southern Europe 10 Other Southern Europe 10 Other Southern Europe | 2<br>36417<br>5<br>15388<br>52<br>244<br>98<br>182<br>113<br>522<br>42<br>154<br>33<br>73<br>30<br>74<br>84<br>44<br>53557 |       | -97 Refused -54 Missing by design -20 Foreign, but not co 1 Germany 2 Italy 3 Poland 4 Romania 5 Turkey 6 Former Yugoslavia 7 Former Soviet Union 8 Central and South A 9 Northern and Wester 10 North America 11 Other Africa 12 Other Africa 13 Other Africa 14 Other Asia 15 Other Central and E 16 Other Southern Euro Total | odeable                 | 2 36417 5 15388 5 2 244 98 8 182 113 5 222 42 42 154 42 154 43 33 30 74 44 44 5 3557 |
|            | glR Country of place of birth  |  |       | _glR Country of place  |                         |  |
|            | <u>!</u>   | Freq.  |       |  | Freq.                   |  |
| Valid      | -97 Refused   -54 Missing by design   -20 Foreign, but not codeable   germany   120 yugoslavia   121 albania   122 bosnia and herzegovina   124 belgium   :  | 2<br>36417<br>5<br>15388<br>30<br>4<br>22<br>5<br>: 6<br>7<br>2<br>1<br>53557  | Valid | -54 Missing by design<br>-53 Anonymized<br>Total   | 36417<br>17140<br>53557 |  |

#### 3.3 Countries (binary variable)

In school cohorts, an aggregation of countries is coarsened to the binary information German/Non-German. To illustrate this, have a look at variables from Starting Cohort 2 (Kindergarten). The information (\*\*country of birth target child\*\*) was surveyed during the interview using a two-step procedure: first, the respondent is asked if the child was born in Germany or abroad (variable p406000, top left). This variable is not subject to anonymization and therefore does not have a suffix and is equally existent in both SUF-versions. If the child was born abroad, a second question regarding the specific country followed (variable p406010\_g1R, lower left, output is reduced to enhance readability). This second question is purged in the Download-SUF

(lower right). There is no need to generate an additional anonymized version of this second question, as the information is already present in the first shown variable (p406000).

#### **RemoteNEPS** SC2\_pParent\_R\_3-0-0.dta (NEPS SUF, SC2 3.0.0 (remote); doi:10.5157/NEPS:SC2:3.0.0) p406000 -- Target child born in Germany? p406000 -- Target child born in Germany? Valid -98 Don't know | 1 Yes 2 No 7658 173 Total 7832 Missing . 3545 Total 11377 p406010\_g1R -- Country of birth target child Freq. -98 Don't know -20 Abroad, but not codeable 0 germany 124 belgium

#### **Download**

| SC2_pF | aren | t_D_3 | 3-0-0.0 | lta         |                          |      |
|--------|------|-------|---------|-------------|--------------------------|------|
| (NEPS  | SUF, | SC2   | 3.0.0   | (download); | doi:10.5157/NEPS:SC2:3.0 | 0.0) |
|        |      |       |         |             |                          |      |

|           |            | Freq. |
|-----------|------------|-------|
| Valid -98 | Don't know | 1     |
| 1         | Yes        | 7658  |
| 2         | No         | 173   |
| Tota      | ıl         | 7832  |
| Missing . |            | 3545  |
| Total     |            | 11377 |

p406010\_g1R -- Country of birth target child

|                      | Freq. |
|----------------------|-------|
|                      |       |
| Valid -53 Anonymized | 7832  |
| Missing .            | 3545  |
| Total                | 11377 |
|                      |       |

#### **Federal states**

125 bulgaria

476 thailand 479 china 536 new zealand

Missing .

475 syrian arab republic

Regional locations are usually recoded to different derived variables (see section 2.3). In this example, we focus on the region of the school in Starting Cohort 3 (5th graders). The first derived variable is a binary variable for Western and Eastern Germany (tx80109\_g1), present in both SUF-versions (upper left and upper right). The second variable tx80109\_g2R, containing the federal states, is only complete in the RemoteNEPS-SUF (lower left), and is purged in the Download-SUF (lower right).

7832

3545 11377

#### **RemoteNEPS**

# SC3\_CohortProfile\_R\_3-1-0.dta (NEPS SUF, SC3 3.1.0 (remote); doi:10.5157/NEPS:SC3:3.1.0)

#### tx80109\_g1 -- Sample: Federal state school (west/east)

|       |                                | 1   | Freq. |
|-------|--------------------------------|-----|-------|
| Valid | -55 Not determinable           |     | 450   |
| vatiu | -55 NOT determinable           | - 1 | 458   |
|       | 1 Western Germany              |     | 16299 |
|       | 2 Eastern Germany incl. Berlin | Ĺ   | 3784  |
|       | Total                          |     | 20541 |

tx80109\_g2R -- Sample: Federal state school

|           |      | Į.                            | Freq. |
|-----------|------|-------------------------------|-------|
| <br>Valid | -55  | Not determinable              | 458   |
|           | 1    | Schleswig-Holstein            | 784   |
|           | 2    | Hamburg                       | 377   |
|           | 3    | Lower Saxony                  | 2209  |
|           | 4    | Bremen                        | 158   |
|           | 5    | North Rhine-Westphalia        | 4398  |
|           | 6    | Hesse                         | 1308  |
|           | 7    | Rhineland-Palatinate          | 971   |
|           | 8    | Baden-Wuerttemberg            | 3265  |
|           | 9    | Bavaria                       | 2677  |
|           | 10   | Saarland                      | 152   |
|           | 11   | Berlin (Complete)             | 404   |
|           | 12   | Brandenburg                   | 1143  |
|           | 13   | Mecklenburg-Western Pomerania | 619   |
|           | 14   | Saxony                        | 617   |
|           | 15   | Saxony-Anhalt                 | 401   |
|           | 16   | Thuringia                     | 600   |
|           | Tota | al i                          | 20541 |

#### **Download**

SC3\_CohortProfile\_D\_3-1-0.dta (NEPS SUF, SC3 3.1.0 (download); doi:10.5157/NEPS:SC3:3.1.0)

| tx80109 | _g1 · | Sample:   | Federal | state | school | (west/east) |  |
|---------|-------|-----------|---------|-------|--------|-------------|--|
|         |       |           |         |       | ļ      | Freq.       |  |
| Valid   | -55   | Not deter | minable |       | i      | 458         |  |
|         | 1     | Western G | ermany  |       | - 1    | 16299       |  |
|         |       |           |         |       |        |             |  |

Eastern Germany incl. Berlin

3784

20541

tx80109 g2R -- Sample: Federal state school

Total

|       |                | 1 | Freq. |
|-------|----------------|---|-------|
|       |                | + |       |
| Valid | -53 Anonymized |   | 20541 |

#### 3.5 Class size

Sometimes, variables are collected numerical. In the example below, the number of students in class was surveyed from the educator in Starting Cohort 2 (Kindergarten) without any further regulations. Thus, the resulting variable e227400\_g1R (lower left) does not have a coding scheme. This variable is aggregated to the variable e227400\_g1D containing six different class-sizes (upper left). You find this aggregated version in both SUF-versions, the full numerical variable is purged in the Download-SUF, though (lower right).

#### RemoteNEPS

### **Download**

SC2\_pEducator\_R\_3-0-0.dta (NEPS SUF, SC2 3.0.0 (remote); doi:10.5157/NEPS:SC2:3.0.0)

e227400\_g1D -- Class: number of students, total (coarsed)

|       |      |                    | Freq. |
|-------|------|--------------------|-------|
| Valid |      | Unspecific missing | 1     |
|       |      | Missing by design  | 1803  |
|       | 1    | Below 10           | 3     |
|       | 2    | 10 to 14           | 26    |
|       | 3    | 15 to 19           | 203   |
|       | 4    | 20 to 24           | 450   |
|       | 5    | 25 to 29           | 169   |
|       | 6    | 30 to 34           | 4     |
|       | Tota | al                 | 2668  |

e227400\_g1R -- Class: number of students total

|       |                        | Freq. |
|-------|------------------------|-------|
| Valid | -90 Unspecific missing | 10    |
|       | -54 Missing by design  | 1803  |
|       | 8                      | j 3   |
|       | 10                     | j 1   |
|       | 11                     | 1     |
|       | 12                     | 4     |
|       | 13                     | 8     |
|       | 14                     | 12    |
|       | 15                     | 21    |
|       | 16                     | 22    |
|       | 17                     | 34    |
|       | 18                     | 58    |
|       | 19                     | 68    |
|       | 20                     | 75    |
|       | 21                     | 89    |
|       | 22                     | 98    |
|       | 23                     | 88    |
|       | 24                     | 100   |
|       | 25                     | 83    |
|       | 26                     | 39    |
|       | 27                     | 27    |
|       | 28                     | 14    |
|       | 29                     | 6     |
|       | 30                     | 3     |
|       | 31                     | 1     |
|       | Total                  | 2668  |

e227400\_g1D -- Class: number of students, total (coarsed)

|       |      | I                  | Freq. |
|-------|------|--------------------|-------|
|       |      | +                  |       |
| Valid | -90  | Unspecific missing | 10    |
|       | -54  | Missing by design  | 1803  |
|       | 1    | Below 10           | 3     |
|       | 2    | 10 to 14           | 26    |
|       | 3    | 15 to 19           | 203   |
|       | 4    | 20 to 24           | 450   |
|       | 5    | 25 to 29           | 169   |
|       | 6    | 30 to 34           | 4     |
|       | Tota | al į               | 2668  |

e227400\_g1R -- Class: number of students total

|       |  | Freq.                   |
|-------|--|-------------------------|
| Valid | -54 Missing by design<br>-53 Anonymized<br>Total | 1803<br>  865<br>  2668 |

#### A.1 Complete overview

The following table lists all variables which are affected by anonymization methods. For all variables, full information is available OnSite, although for many of them, you already find this complete information in the RemoteNEPS-version. Only for those variables marked with an asterisk, the full information is only present OnSite. For most of the variables, an aggregated or generated version is available, which still transports some information to the Download-version. Please see the previous chapters for more information.

**Table 7:** Complete overview of all restricted variables

| file    | variable     | label (*only available OnSite)                            |
|---------|--------------|---|
|         |              |   |
| pParent | p32601a      | Position generator: country nurse or male nurse           |
| pParent | p32601b      | Position generator: country engineer                      |
| pParent | p32601c      | Position generator: country warehouse/transport worker    |
| pParent | p32601d      | Position generator: country social worker                 |
| pParent | p32601e      | Position generator: country sales clerk                   |
| pParent | p32601f      | Position generator: country police officer                |
| pParent | p32601g      | Position generator: country doctor                        |
| pParent | p32601h      | Position generator: country banker                        |
| pParent | p32601k      | Position generator: country car mechanic                  |
| pParent | p32601l      | Position generator: country legal practitioner            |
| pParent | p32601m      | Position generator: country optician                      |
| pParent | p32601n      | Position generator: country translator                    |
| pParent | p32601o      | Position generator: country teacher at elementary school, |
|         |              | Hauptschule or Real                                       |
| pParent | p400010_g1   | Respondent's country of birth                             |
| pParent | p400010_g2   | Respondent's country of birth (aggregated)                |
| pParent | p400070_g1   | Respondent's mother's country of birth                    |
| pParent | p400070_g2   | Country of birth of respondent's mother (aggregated)      |
| pParent | p400090_g1   | Respondent's father's country of birth                    |
| pParent | p400090_g2   | Country of birth of respondent's father (aggregated)      |
| pParent | p400500_g3   | group of origin   |
| pParent | p400500_g3v1 | Group of origin   |
| pParent | p401150_g2   | Respondent's nationality not German (aggregated)          |
| pParent | p403010_g1   | Partner's country of birth                                |
| pParent | p403010_g2   | Partner's country of birth (aggregated)                   |
| pParent | p403070_g1   | Partner's mother's country of birth                       |
| pParent | p403070_g2   | Country of birth of partner's mother (aggregated)         |
| pParent | p403090_g1   | Partner's father's country of birth                       |
| pParent | p403090_g2   | Country of birth of partner's father (aggregated)         |
| pParent | p404050_g2   | Other nationality partner (aggregated)                    |
| pParent | p406010_g1   | Country of birth target child                             |
| pParent | p406010_g2   | Target child's country of birth (aggregated)              |
| •       | 1            | , , , , ,   |

**Table 7:** (continued)

| file                             | variable              | label (*only available OnSite)   |
|----------------------------------|-----------------------|--|
| pParent                          | p407050_g2            | Target child's nationality (aggregated)                                      |
| pParent                          | p407060_g2            | Target child's second nationality (aggregated)                               |
| pParent                          | p731804_g1            | Highest educational qualification of respondent abroad                       |
| pParent                          | p731804_g2            | Country of respondent's highest educational qualification                    |
|                                  |                       | (aggregated)   |
| pParent                          | p731823_g1            | Country of vocational qualification (additional response)                    |
| pParent                          | p731823_g2            | Country of professional qualification (additional re-                        |
| Dt                               | 7010541               | sponse, aggregated)  |
| pParent                          | p731854_g1            | Country of partner's highest school-leaving qualification                    |
| pParent                          | p731854_g2            | Country of highest educational qualification partner (aggregated)            |
| pParent                          | p731873_g1            | Country of vocational qualification, partner, (additional                    |
|                                  |                       | response)  |
| pParent                          | p731873_g2            | Country of partner's professional qualification (additional                  |
|                                  |                       | response, aggrega  |
| pTarget                          | t400000_g1            | Birth country  |
| pTarget                          | t400000_g2            | Country of birth (aggregated)  |
| pTarget                          | t400070_g1            | Mother: Country of birth   |
| pTarget                          | t400070_g2            | Mother: Country of birth (aggregated)  |
| pTarget                          | t400090_g1            | Father: Country of birth   |
| pTarget                          | t400090_g2            | Father: Country of birth (aggregated)  |
| pTarget                          | t400220_g1            | Country of birth of your mother's mother                                     |
| pTarget                          | t400220_g2            | Mother's mother: Country of birth (aggregated)                               |
| pTarget                          | t400240_g1            | Country of birth of your mother's father                                     |
| pTarget                          | t400240_g2            | Mother's father: Country of birth (aggregated)                               |
| pTarget                          | t400260_g1            | Country of birth of your father's mother                                     |
| pTarget                          | t400260_g2            | Father's mother: Country of birth (aggregated)                               |
| pTarget                          | t400280_g1            | Country of birth of your father's father                                     |
| pTarget                          | t400280_g2            | Father's father: Country of birth (aggregated)                               |
| pTarget                          | t400500_g3            | Group of origin  |
| pTarget                          | t400500_g3v1          | Group of origin  |
| spParentSchool<br>spParentSchool | p723060_g1            | Country of school Country of school (aggregated)                             |
| ParentMethods                    | p723060_g2<br>px80204 | Interview: interview language (realized case)                                |
| TargetMethods                    | tx80204               | Interview: Interview language (realized case)                                |
| pEducator                        | e41100a_g2            | Mother tongue (response 1, ISO 639.2)  |
| pEducator                        | e41100a_g2            | Mother tongue (response 2, ISO 639.2)  |
| pEducator                        | e41100a_g4            | Mother tongue (response 2, ISO 639.2)  Mother tongue (response 3, ISO 639.2) |
| pEducator                        | e41100a_g5            | Mother tongue (response 4, ISO 639.2)  |
| pParent                          | p410000_g1            | Child's language of origin (ISO 639.2)                                       |
| pParent                          | p410000_g2            | Child's language of origin (aggregated)                                      |
| pParent                          | p410002_g1            | Child's other language of origin (ISO 639.2)                                 |
| pParent                          | p410002_g2            | Child's other language of origin (aggregated)                                |
| pParent                          | p412001_g1            | Interaction language household, detailed (ISO 639.2)                         |
| pParent                          | p412001_g2            | Interactive language household detailed (aggregated)                         |
| pParent                          | p413000_g1            | Respondent's language of origin (ISO 639.2)                                  |
|                                  |                       |  |
| pParent                          | p413000_g2            | Respondent's language of origin (aggregated)                                 |

**Table 7:** (continued)

| 01            |            | 11.1(* 1  |   |
|---------------|------------|---|---|
| file          | variable   | label (*only available OnSite)                          |   |
| pParent       | p413002_g2 | Respondent's other language of origin (aggregated)      |   |
| pParent       | p414000_g1 | Partner's language of origin (ISO 639.2)                |   |
| pParent       | p414000_g2 | Partner's language of origin (aggregated)               |   |
| pParent       | p414002_g1 | Partner's additional language of origin (ISO 639.2)     |   |
| pParent       | p414002_g2 | Partner's other language of origin (aggregated)         |   |
| pParent       | p414100_g1 | Recent partner's language of origin (ISO 639.2)         |   |
| pParent       | p414100_g2 | Recent partner's language of origin (aggregated)        |   |
| pParent       | p414102_g1 | Recent partner's other language of origin (ISO 639.2)   |   |
| pParent       | p414102_g2 | Recent partner's other language of origin (aggregated)  |   |
| pTarget       | t41000a_g2 | Mother tongue (1st alternative, ISO 639.2)              |   |
| pTarget       | t41000a_g3 | Mother tongue (2nd alternative, ISO 639.2)              |   |
| pTarget       | t41000a_g4 | Mother tongue (3rd alternative, ISO 639.2)              |   |
| pTarget       | t41000a_g5 | Mother tongue (4th alternative, ISO 639.2)              |   |
| pTarget       | t410010_g2 | Second language (1st alternative, ISO 639.2)            |   |
| pTarget       | t410010_g3 | Second language (2nd alternative, ISO 639.2)            |   |
| pTarget       | t410010_g4 | Second language (3rd alternative, ISO 639.2)            |   |
| pTarget       | t410010_g5 | Second language (4th alternative, ISO 639.2)            |   |
| pTarget       | t41010a_g2 | Mother: Mother tongue (1st alternative, ISO 639.2)      |   |
| pTarget       | t41010a_g3 | Mother: Mother tongue (2nd alternative, ISO 639.2)      |   |
| pTarget       | t41010a_g4 | Mother: Mother tongue (3rd alternative, ISO 639.2)      |   |
| pTarget       | t41010a_g5 | Mother: Mother tongue (4th alternative, ISO 639.2)      |   |
| pTarget       | t41012a_g2 | Father: Mother tongue (1st alternative, ISO 639.2)      |   |
| pTarget       | t41012a_g3 | Father: Mother tongue (2nd alternative, ISO 639.2)      |   |
| pTarget       | t41012a_g4 | Father: Mother tongue (3rd alternative, ISO 639.2)      |   |
| pTarget       | t41012a_g5 | Father: Mother tongue (4th alternative, ISO 639.2)      |   |
| pParent       | p401150_g1 | Citizenship respondent not German                       |   |
| pParent       | p404050_g1 | Other citizenship partner                               |   |
| pParent       | p407050_g1 | Citizenship of the target child                         |   |
| pParent       | p407060_g1 | Second citizenship of the target child                  |   |
| pTarget       | t40115a_g2 | Nationality (response 1; coded)                         |   |
| pTarget       | t40115a_g3 | Nationality (response 2; coded)                         |   |
| pTarget       | t40115a_g4 | Nationality (response 3; coded)                         |   |
| pCourseGerman | ed0015x    | Spelling knowledge - other                              | * |
| pCourseGerman | ed0016h    | Strategies - other                                      | * |
| pInstitution  | h22131x    | School: all-day school programs: other, text 1          | * |
| pInstitution  | h22131y    | School: all-day school programs: other, text 2          | * |
| pInstitution  | h22131z    | School: all-day school programs: other, text 3          | * |
| pInstitution  | h22202t    | School: quality: other, text                            | * |
| pInstitution  | h227011    | School: full-time teachers school subject: other school | * |
|               |            | subjects, text1   |   |
| pInstitution  | h227012    | School: full-time teachers school subject: other school | * |
| •             |            | subjects, text2   |   |
| pInstitution  | h227013    | School: full-time teachers school subject: other school | * |
|               |            | subjects, text3   |   |
| pInstitution  | h229003    | School: approach: educational, text                     | * |
| pInstitution  | h229005    | School: approach: promotion, text                       | * |
| pInstitution  | h229007    | School: approach: integration, text                     | * |
| pInstitution  | h229009    | School: approach: other, text                           | * |
| -             |            |   |   |

**Table 7:** (continued)

| file           | variable   | label (*only available OnSite)                                    |   |
|----------------|------------|---|---|
| pInstitution   | h22901t    | School: profile: other, text                                      | * |
| pInstitution   | h41700a    | Other remedial measures, other                                    | * |
| pInstitution   | h41702a    | Parent training programs, migration, other                        | * |
| pInstitution   | h41704a    | Teacher training programs, migration, other                       | * |
| pInstitution   | hd0041b    | Other function in school administration, specifically:            | * |
| pParent        | p19020j    | Special educational needs OPEN                                    | * |
| pParent        | p26210t    | Parents: tutoring, other subject (open)                           | * |
| pParent        | p296402    | Wish: What vocation should TC learn                               | * |
| pParent        | p401001    | Immigration status other  | * |
| pParent        | p731803    | Highest educational qualification of respondent type open         | * |
| pParent        | p731814    | Vocational qualification respondent (open)                        | * |
| pParent        | p731817    | Type tertiary qualification respondent (open)                     | * |
| pParent        | p731853    | Highest educational qualification partner type open               | * |
| pParent        | p731864    | Vocational degree partner (open)                                  | * |
| pParent        | p731867    | Type tertiary qualification partner (open)                        | * |
| pTarget        | t22260t    | Student: School involvement: Other, text                          | * |
| pTarget        | t261201    | Student: internship duration                                      | * |
| pTarget        | t26212a    | Student: Subject 1  | * |
| pTarget        | t26212b    | Student: Subject 2  | * |
| pTarget        | t26212c    | Student: Subject 3  | * |
| pTarget        | t262400    | Student: Content of part-time job                                 | * |
| pTarget        | t268111    | Student: tutoring location somewhere else, text                   | * |
| pTarget        | t27111t    | Courses outside school: other courses, open                       | * |
| pTarget        | t27111u    | Student: Courses outside of school: Other courses: Text, what     | * |
| pTarget        | t27111v    | Student: Courses outside of school: Music school lessons, text    | * |
| pTarget        | t27111w    | Student: Courses outside of school: Volkshochschule course, text  | * |
| pTarget        | t27111x    | Student: Courses outside of school: Youth art school course, text | * |
| pTarget        | t27270h    | Student: Participation organization/group: other, text            | * |
| pTarget        | t31060a    | Idealistic vocational aspirations: preferred choice of career     | * |
| pTarget        | t31160a    | Realistic vocational aspirations: preferred choice of career      | * |
| pTarget        | t34002f    | Frequency reading (genre): namely                                 | * |
| pTarget        | t526012    | Place warm meal: other place                                      | * |
| pTarget        | td0021x    | Favorite subject  | * |
| pTarget        | tf00070    | first job wish  | * |
| pTarget        | tf0013b    | Second desires profession indication                              | * |
| pTarget        | tf0021b    | vocational training   | * |
| pTarget        | tf00260    | Application, occupation 1   | * |
| pTarget        | tf0029b    | Application vocation 2  | * |
| spParentGap    | ps29102    | Other activity  | * |
| spParentSchool | p723090    | Type of school (open)   | * |
| CohortProfile  | tx80109_g2 | Sample: Federal state school                                      |   |

**Table 7:** (continued)

| file           | variable     | label (*only available OnSite)  |
|----------------|--------------|---|
| Weights        | stratum_imp2 | implicit stratum 2 (federal states of institution)                            |
| Weights        | stratum_imp3 | implicit stratum 3 (regional classification of institution)                   |
| Weights        | stratum_imp4 | implicit stratum 4 (organizing institution)                                   |
| pEducator      | e537110_g2   | Place of study teaching post (Federal State)                                  |
| pEducator      | e537110_g3   | Place of study teaching post (administrative district)                        |
| pEducator      | e537170_g2   | Place: passed the examination (Federal State)                                 |
| pEducator      | e537170_g3   | Place: passed the examination (administrative district)                       |
| pParent        | p751001_g2   | Place of Residence (Federal State)  |
| pTarget        | tx44401_g2   | Place of school (federal state)   |
| spParentSchool | p723030_g2   | Municipality of school (federal state)  |
| spSibling      | p723050      | State of school   |
| pCourseClass   | e227400_g1   | Class: Number of students total   |
| pCourseClass   | e229400      | Class: Set-up: Classroom size   |
| pCourseGerman  | ed0001h      | Amount of German lessons, number  |
| pCourseGerman  | ed0001m      | Minutes per German lesson, minutes  |
| pCourseGerman  | ed0002h      | Amount of remedial German lessons (number)                                    |
| pCourseMath    | ed00035      | Remedial Math teaching lessons  |
| pCourseMath    | ed0025h      | Amount of math lessons (number)   |
| pCourseMath    | ed0025m      | Amount of math lesson (minutes)   |
| pEducator      | e229820      | Time in occupation - overall  |
| pEducator      | e229821      | Time in occupation - school   |
| pEducator      | e536020      | Age when profession chosen  |
| pEducator      | e53702y      | Year of university entrance qualification                                     |
| pEducator      | e53710y      | First enrollment university education for teaching professions                |
| pEducator      | e537150      | Year of state examination   |
| pEducator      | e76212y      | Year of birth   |
| CohortProfile  | tx80505      | List of children / pupils: Special educational needs target child             |
| pParent        | p727001      | Recommendation secondary school or course of education, which ones?           |
| pParent        | p727002      | Recommendation secondary school or course of education, further ones?         |
| pParent        | p731911      | Number of employees respondent  |
| pParent        | p731961      | Number of employees partner   |
| Weights        | tx80113      | Total number of classes in the 8th grade (according to the Federal Statistica |
| Weights        | tx80114      | Total number of classes in the 8th grade (according to the Federal Statistica |
| pCourseClass   | e190011      | Class: Amount of students with special needs                                  |
| pCourseClass   | e199001      | Class: amount of students with special needs learning                         |
| pCourseClass   | e199002      | Class: amount of students with special needs language                         |
| pCourseClass   | e199003      | Class: amount of students with special needs physical/motor development       |
| pCourseClass   | e199004      | Class: amount of students with special needs emotional/social development     |
| pCourseClass   | e199005      | Class: amount of students with special needs mental development               |

**Table 7:** (continued)

| file                      | variable   | label (*only available OnSite)                                  |   |
|---------------------------|------------|---|---|
| pCourseClass              | e199006    | Class: amount of students with special needs sight              |   |
| pCourseClass              | e199007    | Class: amount of students with special needs hearing            |   |
| pCourseClass              | e199008    | Class: amount of students with special needs autism             |   |
| pCourseClass              | e227400    | Class: Number of female students                                |   |
| pCourseClass              | e227401    | Class: Number of male students                                  |   |
| pCourseClass              | e451000    | Day care facility: Amount of students with migration background |   |
| pCourseClass              | e79201a    | Class: proportion class affiliation - low class                 |   |
| pCourseClass              | e79201b    | Class: proportion class affiliation - middle class              |   |
| pCourseClass              | e79201c    | Class: proportion class affiliation - upper class               |   |
| pCourseClass              | e79202a    | Class: proportion of parents with a higher education de-        |   |
|                           |            | gree  |   |
| pEducator                 | e537030    | Federal state higher education entrance qualification           |   |
|                           |            | (Federal state)   |   |
| pEducator                 | e537110_g4 | Place of study teaching post (county, as of 2013)               |   |
| pEducator                 | e537170_g4 | Place: passed the examination (county, as of 2013)              |   |
| pEducator                 | e537200    | Federal state second state examination (Federal state)          |   |
| pEducator                 | e76212m    | Month of birth  | * |
| pInstitution              | h76612m    | Month of birth  | * |
| pParent                   | p435030_g1 | Religion and religiosity: other religious community             |   |
| pTarget                   | t435030_g1 | Religion and religiosity: other religious community             |   |
| pTarget                   | t43504a_g1 | Religion or denomination (specific)                             |   |
| pTargetMicrom             |            |   | * |
| pTargetRegioInfas         |            |   | * |
| pInstitutionMicrom        |            |   | * |
| pInstitution Regio In fas |            |   | * |
| pInstitution              |            |   |   |

# **B** References