

## **Annex B. Technical standards**



Organisation for Economic Co-operation and Development (OECD)

## Teaching and Learning International Survey (TALIS) 2018

### Technical Standards

#### Final version

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#### Consortium



International Association for the Evaluation of Educational Achievement – IEA  
(Amsterdam, The Netherlands and Hamburg, Germany)



Statistics Canada (Ottawa, Canada)



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## INTRODUCTION

The Teaching and Learning International Survey (TALIS) 2018 establishes technical standards and guidelines in a concise, dedicated document, which apply to key planning and operational tasks. As such, the National Project Managers and data users are the two main target audience groups for these standards. The objectives are to:

- explicitly indicate the data quality expectations, survey implementation and best practices endorsed by the Consortium, the Technical Advisory Group (TAG), the OECD Secretariat, and eventually the TALIS Governing Board (TGB);
- establish a collective agreement on quality among the Participants<sup>1</sup> and the international actors stated above; and
- ensure that all Participants collect data using consistent and sound methodology and that the national survey design and implementation yield high-quality, *i.e.* precise, generalisable and internationally comparable, data.

The standards presented in this document are generally agreed-upon best practices in survey research to be adhered to in the conduct of the project (see for example: IEA 1999, Biemer and Lyberg 2003, Statistics Canada 2009, TALIS 2013 Technical Standards OECD, 2012a). Further, aspects of the specific implementation by the current Consortium are stated. In addition to the standards themselves, the document may provide notes, guidelines, clarifications or recommendations, which are designed to further improve the quality of the survey implementation and results. The standards are produced for both the Field Trial and the Main Survey, yet deviations for the Field Trial are indicated where necessary.

The standards described in this document for TALIS 2018 are based on those that were in place for TALIS 2008 and TALIS 2013 and are extended and adapted to the design of TALIS 2018 as necessary.

- In standards section 1 (Survey ethics and planning) Standard 1.10 was updated to reflect common advances in technology, e.g. the support of PCs operating under Windows 7 or more recent operating systems. Standard 1.21 requires that all national options<sup>2</sup> be field trialled. This standard has been newly introduced to ensure appropriate evidence for the functioning and implications of the national options.
- In standards section 2 (Communication) Standard 2.4 describes the main means of communication and has been updated to reflect the composition of the TALIS 2018 Consortium.
- Standards section 3 describes the standards on sampling design, weighting and adjudication. Standard 3.1 has been newly introduced to reflect the ISCED classification (2011) on which target population definitions for TALIS 2018 will be anchored. To allow bridging from ISCED 1997 to ISCED 2011, data will be collected under both vintages. Procedures to this effect are given in the Sampling Manual. Standard 3.18 has been updated to reflect TALIS 2018 requirements with respect to the minimum response per item and participant for field trial validation purposes. The sizes of the field trial samples are set at 30 schools and 20 teachers per school to support the rotated FT design. Guidelines and comments for Standard 3.23 (estimation weight and sampling error) have been moved to section 10 of the standards. Standard 3.30 (recommendation for adjudication) has been updated following the recommendations for adjudication rules suggested by the BPC at its 19<sup>th</sup> BPC meeting. A rule was added for TALIS 2018 participants that reach a participation rate between 50 % and 75 % before and after school replacement. Participation will be rated as “poor”.

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<sup>1</sup> “Participant” in TALIS 2018 is defined as an OECD or partner country, economy, province, region or similar sub-national entity.

<sup>2</sup> TALIS 2018 offers TALIS participants the opportunity to add a limited amount (not more than five minutes response time) of national questions, items or categories if the international questionnaire is not jeopardised regarding total response time.

- Standards section 4 describes the standards for instrument adaptations, translation/ verification and associated manuals. The standards in this section have been updated to reflect the introduced TALIS 2018 tools and systems. Standard 4.2 reflects the new requirement that if more than one language is administered in the main survey translation into and approval of all languages is required prior to the Field Trial.
- Standard 5.9 (School Coordinator Training, Standards section 5) has been newly included to reflect customs from TALIS 2013 (face-to-face training of School Coordinators or interactive online training).
- The standards in section 6 (data collection and participation monitoring) have been combined from the previous sections 7 and 8 (TALIS 2013) for the sake of simplicity and updated to reflect TALIS 2018 tools and systems.
- Section 7 (Observing the quality of data collection) has been updated to include information about a brief online survey that will be piloted by the Consortium during the Main Survey, aimed to enhance the evidence base and monitor compliance.
- Standard 7.7 in Section 7 (Observing the quality of data collection) has been updated to clarify that national quality observations are required for both the Field Trial and the Main Survey. The design of the National Quality Control programme is at the discretion of each Participant. National quality observations are an important means to collect information about the implementation in schools and can inform and enrich the discussions held at NPM meetings.
- Standard 8.6 (section 8: Data capture of paper instruments, verification, submission and management) bullet point two has been amended to reflect the equal distribution of double captured Teacher Questionnaires among the three different Forms (A-C) administered in the Field Trial.
- Standards 9.9 (encryption of data on external devices) and 9.10 (continuity of data availability) in Section 9 (Confidentiality, security and preparation of the international database) have been newly introduced to strengthen the overall information security and availability.
- Section 10 (Data analysis and reporting) is a newly introduced section which extends previously distributed standards on analysis, estimation and reporting.

The primary responsibility for the drafting of the technical standards lies with the Consortium. Standards developed for similar surveys were reviewed and taken into consideration. The standards are grouped by content area and numbered within each area to make references clear and easily accessible (*e.g.* Standard x.x - Standard description). Each section includes the rationale and purpose of the standards, the standards themselves, and a list of quality assurance and control measures.

The primary responsibilities for areas are allocated as follows:

- IEA Hamburg: survey planning, communication; instrument adaptation, data collection/field operations, data capture and verification, confidentiality and security, and analysis;
- IEA Amsterdam: instrument translation and verification, and international quality control;
- Statistics Canada: sampling and weighting, and analysis;

The Consortium develops the proposed set of standards in consultation with the OECD Secretariat and the Technical Advisory Group (TAG). Drafts are provided for comment to the TALIS Governing Board (TGB) and in parallel to the National Project Managers (NPM). The Consortium then incorporates comments and determines if any standards present foreseeable difficulties or obstacles for Participants. The technical standards will then finally be adopted by the TGB. Following the field trial, revisions to the standards will be implemented as necessary.

Once the standards are adopted, it is essential that all Participants follow them. Where this is not possible, Participants may apply for derogations from the standards by contacting the Consortium in writing. Likewise, where the standards stipulate that variations from them require agreement or pre-approval between the Participant and the Consortium, National Project Managers are asked to initiate the process and to undertake everything possible to facilitate an agreement. Where agreement between Participants and the Consortium cannot be reached, the OECD Secretariat will be asked to contribute to a resolution.

Where standards have been fully met, data will be recommended for inclusion in the datasets and reports. Where standards have not been fully met, the adjudication process implemented by the Consortium in consultation with the OECD Secretariat and TAG determines the extent to which the data quality has been affected. The results determine whether data can (or cannot) be recommended for unconditional inclusion in the datasets and consequently reporting.

Inquiries pertaining to the standards should be addressed to the OECD Secretariat at [talis@oecd.org](mailto:talis@oecd.org) and the Consortium at: [talis@iea-hamburg.de](mailto:talis@iea-hamburg.de).

## 1 SURVEY ETHICS AND PLANNING

### Rationale and purpose

TALIS 2018 with its varieties of international options and its growing number of participating countries and economies since the first TALIS cycle is a demanding project that requires careful survey planning at the international as well as at the national level. Similarly, all countries and organisations participating in the conduct of TALIS must adhere to recognised standards of ethical research practices.

### Survey ethics and general practice

**Standard 1.1** Researchers<sup>3</sup> and NPMs adhere to professional standards for scientifically rigorous research at all stages of the survey.

- Researchers and NPMs follow best practices in survey design, data collection and post-survey processing according to these TALIS standards and guidelines.
- Researchers clearly and objectively describe TALIS' major research questions and data collection needs (*e.g.* in the framework).
- Researchers ensure that each question in the survey addresses a specific measurement goal, do not collect new data unnecessarily and balance the need for information against the effort that is required to complete additional survey questions.
- NPMs submit research plans to the applicable institutional review boards and/or ethics committees for approval and document the correspondence and outcome.
- NPMs hire or equip staff involved in design, data collection and analysis with appropriate skills to perform scientifically rigorous research.
- NPMs train staff on the importance of ethics and scientific rigor in research involving human subjects.

**Standard 1.2** Researchers and NPMs have a responsibility to survey respondents and protect their data privacy.

- Researchers and NPMs avoid using practices or methods that may harm, humiliate or intentionally mislead survey respondents.
- Researchers and NPMs are sensitive to social and cultural differences as well as local customs when contacting respondents and administering the survey.
- Participation in the survey should not impose an undue burden for the respondent.
- Researchers and NPMs administer the survey in such a way that it is easy and comfortable for a respondent to answer and make every effort to facilitate the data collection process for the respondent.

**Standard 1.3** Researchers and NPMs respect the free will and privacy of respondents.

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<sup>3</sup> The term „researcher(s)“ in this document refers to all persons involved in the preparation, implementation, analysis and reporting of the TALIS 2018 project. This includes Consortium staff, OECD staff, QEG members, national centres and survey organisations staff contributing to the project.

- NPMs ensure that each respondent receives sufficient information and, where required, opportunity to give informed consent prior to participation in the survey.
- While NPMs and data collectors should attempt to avoid and convert respondent refusals, they do not allow these practices to approach harassment.

### **National Project Managers and national centres**

**Standard 1.4** Each Participant nominates one (1) National Project Manager (NPM) by no later than 29 February 2016. The NPM has overall responsibility for implementing TALIS and its options, where applicable, at the national level according to the standards, guidelines, procedures and timelines set by the Consortium.

- The roles, responsibilities and resources of NPMs as well as an indicative list of tasks is described in document *Item 4b - EDU-INES-TALIS(2015)8 – NPM roles responsibilities and resources – ENG.pdf* prepared for the 19<sup>th</sup> Meeting of the Board of Participating Countries (BPC) in Copenhagen, Denmark on 26-27 November 2015. The document is considered an integral part of the technical standards presented here.
- For those Participants that have implemented either TALIS 2008 or TALIS 2013, it is recommended to reappoint the previous NPM for the sake of continuity. Where this is not possible or desired, new NPMs should liaise at least initially with the previous NPM and team in order to maximise the use of materials, experiences and strategies gained in the previous round(s).
- If an NPM cannot be appointed by the stated date, the concerned Participant ensures that they are represented adequately in communication with the Consortium and at scheduled NPM meetings.

**Standard 1.5** Participants implement a systematic and comprehensive knowledge transfer if the NPM is replaced before June 2019 in order to prevent the national centre from losing information or falling behind with respect to the survey's timeline and tasks.

**Standard 1.6** To ensure continuity of activities over time, the NPM position is desirably full-time under stable contract conditions, at a minimum until the release of the initial international report by OECD, scheduled by June 2019. ..

- Depending on the availability of administrative assistants and senior staff for data management, sampling activities and/or field operations, NPMs time commitment could be less, but desirably not less than 50% of their time.

**Standard 1.7** The NPM establishes a national study centre and ensures that qualified staff is allocated to the project (see standard 2.4).

- Since data-related tasks tend to be highly technical and require specialist skills, each Participant should appoint a National Data Manager (NDM) to provide support for the NPM with respect to data-related and technical tasks and responsibilities.
- Participants may consider appointing a National Sampling Manager (NSM) to take responsibility for all sampling-related activities, including national sample planning and stratification, frame preparation, sample selection, non-response bias analysis and communication with the Consortium's sampling team. This recommendation applies specifically to Participants taking up options where a more complex sample implementation is needed.

**Standard 1.8** NPMs inform the Consortium about key staff at the national centre. The NPM also informs the Consortium if key national centre staff leaves the project.

- NPMs take note of the confidentiality and security requirements detailed in section 9, specifically with respect to the required signed confidentiality agreements.

**Standard 1.9** If a third party survey organisation is contracted for all or parts of the data collection work, NPMs inform the Consortium of the name, qualifications and scope of work of the survey organisation.

### **Technology and infrastructure**

**Standard 1.10** Since the materials and tools provided by the Consortium are designed to work on Microsoft Windows PCs, international and national centres work with PCs running under Microsoft Windows operating systems.

- Microsoft Windows 7 Service Pack 1, 8.1 or 10 are supported.
- The above versions of Windows should work without problems inside a virtual environment on a non-Windows host system (*e.g.* inside VMWare or VirtualBox), yet such setups have not been explicitly tested and are not actively supported.
- Older Windows versions, Apple Macintosh or Linux systems are not recommended or supported.

**Standard 1.11** National centres have a reliably working Internet connection in order to communicate with the Consortium and exchange files and documents.

**Standard 1.12** National centres have PCs with Microsoft Office 2010 or higher installed, minimally including Word (.docx format) and Excel (.xlsx format), preferably also PowerPoint (.pptx format) for the review of meeting presentations.

### **Piloting, Field Trial and Main Survey participation**

**Standard 1.13** Participants who have opted for one or more of the international options (ISCED Level 1 and ISCED Level 3) make themselves available to participate in the pilot data collection.

- The pilot data collection does not require the contribution of all Participants but should be representative of all educational levels (ISCED 1, 2, and 3), all major regions, and key language contexts.

**Standard 1.14** At the appropriate stages, national centres provide feedback to the Consortium on the development of the framework, instruments and other content-related matters that represent the perspectives of the relevant national stakeholders.

**Standard 1.15** Field Trial participation is mandatory for all Participants and all international survey options.

- This implies that 31 August 2016 is the ultimate deadline for late joining Participants and that joining past this date may only be accepted if this does not jeopardise the overall schedule and standards.

**Standard 1.16** The Main Survey data collection takes place towards the end of the school year. This translates to October to December 2017 for southern hemisphere Participants and March to May 2018 for the northern hemisphere Participants. Southern hemisphere countries participating in the TALIS-PISA link collect the TALIS-PISA link data in October to December 2018 in line with the PISA data collection period.

**Standard 1.17** Following the Main Survey data collection, Participants are involved in the production and verification of the tables, exhibits and narrative produced for the international reports.

**Standard 1.18** Data or results from the Field Trial are not disclosed to the general public, participating schools or respondents and are similarly not used for any other reporting or output purposes. The Field Trial

is implemented to i) validate the instruments and derived measures and to ii) trial the operational procedures only.

### **National options**

**Standard 1.19** National options do not jeopardise or endanger the completion of the international part(s) of the survey.

**Standard 1.20** Only national options that are agreed upon between the national centre and the Consortium are implemented.

**Standard 1.21** National options are field trialled.

**Standard 1.22** Participation in national options are agreed upon before 30 September 2016 for the Field Trial and before 30 June 2017 for the Main Survey.

- National options that have a bearing on international tools and methodologies (*e.g.* the Within-school Sampling Software) are discussed at the earliest possible convenience. National Project Managers are asked to initiate such discussions with the Consortium.

### **Quality assurance and control**

The following list includes key features intended to ensure quality standards are met regarding survey ethics and planning.

- NPM and national centre staff nomination forms
- documented staff changes and systematic knowledge transfers
- documented participation in international options
- documented and agreed-upon national options

## 2 COMMUNICATION

### Rationale and purpose

The TALIS 2018 project requires high communication standards to enable smooth and transparent communication throughout its lifecycle. NPMs have to ensure that there are no communication gaps arising during absences or staff changes.

### Communication and meetings

**Standard 2.1** NPMs are the primary contact persons for the Consortium regarding all TALIS related issues.

**Standard 2.2** The Consortium generally responds to any written request (*i.e.* e-mail) within one working day if at all possible or, if processing takes longer, acknowledges the receipt of a national centre request, indicating the amount of time required to respond.

**Standard 2.3** Conversely, national centres respond to any written requests from the Consortium within one working day if at all possible or, if processing takes longer, acknowledge the receipt of a request, indicating the amount of time required to respond.

**Standard 2.4** The main means of communication is e-mail and the main contacts are as follows:

- All e-mails to the sampling team at Statistics Canada are addressed to [statcan.talis2018-talis2018.statcan@canada.ca](mailto:statcan.talis2018-talis2018.statcan@canada.ca).
- All e-mails regarding translation verification, and national and international quality control during data collection should be addressed to the IEA Amsterdam, The Netherlands: [talis@iea.nl](mailto:talis@iea.nl).
- All other communication – or in case of doubt – should be addressed to the International Study Centre (ISC) account [talis@iea-hamburg.de](mailto:talis@iea-hamburg.de) that is accessible to all TALIS-related staff working at the ISC in Hamburg, Germany.

**Standard 2.5** The [talis@iea-hamburg.de](mailto:talis@iea-hamburg.de) account at the ISC is copied in on any direct NPM correspondence with Consortium partners (other than the ISC) or the OECD Secretariat.

**Standard 2.6** E-mail subject lines to the Consortium include the appropriate 3-digit operational Participant code as well as a meaningful subject lines.

- Examples of meaningful e-mail subject lines are: “XXX - Question on TALIS-PISA link sampling frame”.
- E-mails with highly generic subject lines such as “question” or “urgent clarification” or no subject line at all should be avoided to allow for proper processing and retrieval.

**Standard 2.7** NPMs ensure that all key staff at the national centre has access to the TALIS e-mails relevant to their area of work.

- Where possible, the Consortium recommends to set-up a central, national TALIS e-mail project account that includes the 3-digit operational code or the Participant name, such as [talis\\_xxx@institute.xxx](mailto:talis_xxx@institute.xxx).
- If this is not possible, the NPM is responsible for organising smooth communication within the national centre, for example during absences.

**Standard 2.8** NPMs as well as key staff members that are authorised to communicate with the Consortium are proficient in English.

**Standard 2.9** NPMs inform the Consortium without delay of any unforeseen issues that arise during the performance of the tasks and that may have operational implications for the Participant and/or the Consortium (*e.g.* delays) or on the outcomes and success of the Core ISCED Level 2 survey or the international options. The national centre should not take decisions on substantial issues without consulting with the Consortium first.

**Standard 2.10** NPMs (and other key national staff, as applicable) attend all international NPM meetings and training sessions convened by the Consortium during the survey period as indicated in the overall survey schedule.

**Standard 2.11** If necessary, webinars, on-screen meetings and phone conferences can be arranged at the Consortium’s discretion to clarify and discuss issues.

**Standard 2.12** National centres develop appropriate mechanisms in order to promote participation, effective implementation of the data collection and dissemination of results amongst all relevant national stakeholders.

### **Document and data exchange**

**Standard 2.13** TALIS uses a secure, password protected SharePoint site as the main platform for document and data exchange.

- The site is organised in a “Home” site, which is accessible to all groups and actors, as well as a general “NPM” site. The general site contains Participant sites/folders, which are only accessible to the respective Participant, the Consortium and the OECD Secretariat.
- Materials such as data files, instruments and manuals are exchanged via SharePoint.

**Standard 2.14** NPMs indicate to the Consortium if key staffs, other than the NPM, need access to SharePoint. Conversely, if national centre staff leaves the project, the NPM informs the Consortium immediately.

**Standard 2.15** All documents uploaded on SharePoint should follow an effective naming convention, including, where applicable, the survey phase and the revision date at the end.

- The following are examples:
  - for the pilot: TALIS2018\_PI\_document\_name\_14Mar2016
  - for the Field Trial: TALIS2018\_FT\_document\_name\_08Jul2016
  - for the Main Survey: TALIS2018\_MS\_document\_name\_30Dec2017

### **Quality assurance and control**

The following list includes key features intended to ensure quality standards are met regarding communication.

- timely and effective virtual and face-to-face communication
- early indications of unforeseen problems or issues
- use of SharePoint as a document exchange platform to ensure proper management of documents and materials

- document access to SharePoint

### 3 SAMPLING DESIGN, WEIGHTING AND ADJUDICATION

#### Rationale and purpose

High quality, reliable and comparable data and estimates require sound field procedures and unbiased probabilistic sampling plans.

The following standards concern the sampling designs for the Core survey of TALIS 2018 (ISCED Level 2) and the international options ISCED Level 1, ISCED Level 3 and the TALIS-PISA link.

#### Core ISCED Level 2 Survey

##### *Populations*

**Standard 3.1** The 2011 edition of the International Standard Classification of Education (ISCED 2011) is the reference for TALIS 2018. To allow bridging from ISCED 1997 to ISCED 2011, data will be collected under both vintages. Procedures to this effect are given in the Sampling Manual.

**Standard 3.2** The population covered by the Core of TALIS 2018 encompasses as many as possible of the ISCED Level 2 teachers (as defined in the Sampling Manual) and is as comparable as possible across Participants.

- *In-scope:* All classroom teachers teaching at least one ISCED Level 2 class and their school principals, and all subject matters are included.
- *Out-of-scope:* Teachers in schools for special education needs students and their principals, teachers in adult education schools and their principals, teachers teaching only to adults in regular schools, and substitute and emergency teachers are excluded from the target population. Non-teaching staff (nurses, school psychologists, teachers' aides, etc.) are also out of the TALIS 2018 scope.

**Standard 3.3** The international survey population is defined as the international target population to maintain the best coverage of the ISCED Level 2 teachers and principals.

**Standard 3.4** The national target population does not deviate from the international target population.

**Standard 3.5** The national survey population is as close as practically possible to the national target population.

- *Inclusions:* To maintain comparability, no group of teachers excluded from the international survey population may be added to the national survey population.
- *Exclusions:* For reasons of practicality, safety or economy (*e.g.* remote schools, unique demographic groups, types of schools, areas under civil unrest, natural catastrophe), the national survey population may be reduced. The exclusions are fully documented and do not account for more than 5% of the national target population of ISCED Level 2 teachers.

##### *Sampling frames*

**Standard 3.6** To ensure the entire coverage of the national survey population, the most recent vintage of the list of all schools offering at least one regular class of ISCED Level 2 education is obtained and used as the school sampling frame. Similarly, the lists of teachers are created at the last possible moment before within-school sampling.

- All listings of teachers must comprise all in-scope teachers as indicated in the Sampling Manual and not be limited to the selected or participating teachers, unless all are selected and participating.

**Standard 3.7** To ensure that efficient sampling can be implemented, the sampling frame at each stage of sampling must contain all data fields specified in the TALIS 2018 Sampling Manual.

**Standard 3.8** Information contained in the sampling frame(s) is used for quality assurance and quality control of within-school sampling and data collection.

#### *Sample selection*

**Standard 3.9** To ensure that the results of TALIS 2018 be based on samples representing the populations from which they are drawn, all samples must be drawn according to recognised probability sampling theory and practices. Non-probability sampling (*e.g.* quota sampling, convenience sampling) is not allowed, neither for the Field Trial nor for the Main Survey.

**Standard 3.10** In order to simplify the assessment of how well the sampling frames cover their respective target populations, to ensure timely delivery of school samples to national teams, and to standardise the transmission of information between the various within-school sampling, collection monitoring and data processing systems, all samples of schools are drawn by the Consortium.

**Standard 3.11** For the same reasons, all samples of teachers are selected using the IEA Within-School Sampling Software<sup>4</sup> (WinW3S) provided by the Consortium.

**Standard 3.12** All samples of schools are drawn with probability proportional to size whenever an appropriate measure of size is available on the school sampling frame, as indicated in the TALIS 2018 Sampling Manual.

**Standard 3.13** All samples of teachers are drawn with equal probability using the software provided by the Consortium.

- *Exception:* To reduce excessive response burden, teachers who participate in the Field Trial and teachers who are also the principal of their school may be excused from the Main Survey data collection as indicated in the TALIS 2018 Sampling Manual.

**Standard 3.14** While recognising the potential for non-response bias, in order to maintain the sample size to its highest level, non-responding schools may be replaced with an alternative selection. Replacement schools are selected at the same time as the main sample of schools is. Each sampled school has (up to) two designated replacement schools. Only non-responding schools may be replaced; out-of-scope schools may not be replaced. To minimise the risks of inflating sampling error, replacement schools are weighted as if they had been selected in the main sample.

**Standard 3.15** Closed or out-of-scope schools erroneously present on the frame and selected as part of the sample may not be replaced.

**Standard 3.16** All replacement schools are identified at the time of sample selection by the Consortium, in conformity with the sampling plan and the Sampling Manual.

**Standard 3.17** Non-responding teachers may not be replaced.

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<sup>4</sup> The IEA Windows Within-School Sampling Software (WinW3S) is a software originally developed by the IEA for international large-scale assessments administered in the school context (*e.g.* to sample students and/or teachers within schools).

*Sample sizes*

**Standard 3.18** The sizes of the Field Trial samples are set at 30 schools and 20 teachers per school.

- The Field Trial sample size is intended to yield a minimum number of 200 responses per item (not considering attrition) even under a form design that presents some items or alternatives to only one third of respondents.

**Standard 3.19** The sizes of the samples for the Main Survey are set at 200 schools and 20 teachers per school.

- *Exception:* After discussion with the Consortium and upon agreement, the sample sizes may be modified for a given Participant to accommodate particular national conditions.
- In any case, the resulting effective sample sizes should be equivalent to those of any other Participants following the general sampling design.

*Weighting and estimation*

**Standard 3.20** The Consortium computes 1<sup>st</sup> stage (*i.e.* schools) design weights and non-response adjustment factors, 2<sup>nd</sup> stage (*i.e.* principals and teachers) design weights and non-response adjustment factors, and final estimation weights, for each participating teacher and principal record.

**Standard 3.21** The Consortium computes coverage indices (*i.e.* the ratio of the estimated population to official or frame statistics) for each Participant. Important discrepancies between frame and survey results indicated by unexpectedly large or unexpectedly small ratios are investigated.

**Standard 3.22** The Consortium computes replication weights based on Fay's variant of McCarty's Balanced Repeated Replication (McCarthy 1966, 1969; Fay 1989; Judkins 1990)

- Up to one hundred (100) replicates are created for each Participant with a Fay factor of 0.5.

**Standard 3.23** To ensure the unbiasedness of the estimates and to reflect the complex structure of the TALIS 2018 samples and data, all estimates are weighted and are accompanied with the appropriate measure of their sampling error. Details are provided in Section 10.

**Standard 3.24** For testing purposes, and as a quality control measure, all estimation and replication weights are computed by the Consortium following the Field Trial.

- These estimates are not made available to the TALIS 2018 Participants because the preliminary nature of these data does not allow any population inferences.

*Response rates, participation and adjudication*

**Standard 3.25** For testing purposes, and as a quality assurance measure, participation rates are computed by the Consortium following the Field Trial.

**Standard 3.26** The Consortium computes weighted and un-weighted participation rates for teachers and principals.

**Standard 3.27** The aim of any survey is to reach 100% response of the selected respondents. The minimum expected in TALIS 2018 is 75% of schools and 75% of teachers across all participating schools.

**Standard 3.28** For the purposes of the adjudication of school- or principal-level data (see Table 1):

- A “participating principal” is one who is administered the entire questionnaire and provides at least one response; this implies that imputation of partial data from administrative records will be considered non-response.
- A “participating school” is one whose principal participates in TALIS.

Table 1: Adjudication rules for school- or principal-level data in TALIS 2018

SCHOOL PARTICIPATION		RISK OF SCHOOL NON-RESPONSE BIAS	RATING
before replacement	after replacement		
$\geq 75\%$	$\geq 75\%$		GOOD
50% - 75%	$\geq 75\%$		FAIR
	50% - 75%	LOW	FAIR
		HIGH	POOR
$< 50\%$	INSUFFICIENT		

**Standard 3.29** For the purposes of adjudication of teacher-level data (see Table 2):

- A participating “teacher” is one who is administered the entire questionnaire and provides at least one response; this implies that imputation of partial data from administrative records will be considered non-response.
- A “participating school” is one where at least 50% of the selected teachers participate.

Table 2: Adjudication rules for teacher-level data in TALIS 2018

SCHOOL PARTICIPATION		TEACHER PARTICIPATION AFTER SCHOOL REPLACEMENT	RISK OF TEACHER NON-RESPONSE BIAS	RATING
before replacement	after replacement			
$\geq 75\%$	$\geq 75\%$	$\geq 75\%$		GOOD
50% - 75%	$\geq 75\%$	50% - 75%		FAIR
		$\geq 75\%$		FAIR
		50% - 75%	LOW	FAIR
HIGH	POOR			
50% - 75%	50% - 75%			POOR
$< 50\%$	$\geq 75\%$			POOR
$< 50\%$	$< 75\%$	INSUFFICIENT		

**Standard 3.30** The Consortium, in consultation with the OECD Secretariat, formulates a recommendation for the adjudication of the national samples based on the rules on sample returns and participation rates displayed in the tables above.

**Standard 3.31** Following Standard 3.30 on adjudication, Participants are encouraged to submit a “Non-response bias analysis” to the Consortium. Final sample adjudication ratings depend on the conclusions reached by the non-response bias analysis, and on the assessment made by the Sampling Referee.

### International option ISCED Level 1

**Standard 3.32** The standards given above for the Core ISCED Level 2 survey of TALIS are also applied to the ISCED Level 1 international option, with changes as necessary (stated below).

**Standard 3.33** Participants opting to survey ISCED Level 1 adopt a single definition for their schools, valid across both ISCED levels.

**Standard 3.34** The results from ISCED Level 1 are adjudicated independently from those of the Core survey.

### **International option ISCED Level 3**

**Standard 3.35** The standards given above for the Core ISCED Level 2 survey of TALIS are also applied to the ISCED Level 3 international option, with changes as necessary (stated below).

**Standard 3.36** Participants opting to survey ISCED Level 3 adopt a single definition for their schools, valid across both ISCED levels.

**Standard 3.37** The results from ISCED Level 3 are adjudicated independently from those of the Core survey.

### **International option TALIS-PISA link**

**Standard 3.38** The standards given above for the Core ISCED Level 2 survey of TALIS are also applied to the TALIS-PISA link international option, with changes as necessary (stated below).

**Standard 3.39** The target population is defined as those teachers that teach PISA-eligible students. These need not be the teachers of the students who take part in PISA 2018 but they must be, at the time of TALIS data collection, teaching a similar cohort.

**Standard 3.40** The coverage of the frame is determined by PISA 2018. However, schools that are deemed in-scope for TALIS 2018 are not excluded from TALIS 2018 because they are out of the scope of PISA 2018.

**Standard 3.41** The sampling of PISA schools is the result of PISA procedures. PISA protocols should be adhered to.

**Standard 3.42** The size of the PISA school sample is determined by PISA 2018.

**Standard 3.43** TALIS 2018 NPMs liaise with the PISA 2018 NPMs to obtain the sampling frames, files and other data items needed to successfully implement the link.

**Standard 3.44** The Consortium computes 1<sup>st</sup> stage non-response adjustment factors specific to the TALIS-PISA link, 2<sup>nd</sup> stage design weight and non-response adjustment factors and final estimation weights.

**Standard 3.45** Replication weights for the TALIS-PISA link should be those of PISA 2018 unless non-response in TALIS-PISA link makes those incorrect. Should such a case arise, the Consortium re-computes replication weights appropriate for the TALIS-PISA link.

**Standard 3.46** Teacher participation rates are set at the same levels for the TALIS-PISA link as they are for the TALIS 2018 Core ISCED Level 2 survey.

**Standard 3.47** The adjudication of the TALIS–PISA link samples is conducted jointly by the PISA 2018 and TALIS 2018 consortia and the OECD Secretariat.

### **Quality assurance and control**

The following list includes key features intended to ensure quality standards are met regarding sampling design, weighting and adjudication.

- sampling manual and forms

- face-to-face consultations
- monitoring of sample implementation
- adjudication process, for the TALIS-PISA link in co-operation with the PISA 2018 Consortium
- report on sampling and weighting for each Participant given to the concerned Participant and to the OECD Secretariat, prepared independently for each ISCED Level and international option

## 4 INSTRUMENT ADAPTATION, TRANSLATION AND VERIFICATION

### Rationale and purpose

These standards ensure that national translations are consistent with the international versions of the TALIS instruments, while allowing for cultural adaptations where necessary. The TALIS questionnaires are subject to a stringent translation, adaptation and verification procedure prior to both the Field Trial and the Main Survey, in order to assure that each Participants' principals and teachers receive equivalent questions and that the data collected is internationally comparable. The external verification of adaptations, translation and layout are part of the survey quality assurance procedures. Although the questionnaires will be administered online, due to expansion rates and differences of word counts of languages, the layout will need to be checked for issues with visibility of text in menu options, buttons, etc.

The following standards concern the TALIS 2018 Core ISCED Level 2 survey instruments (Teacher and Principal Questionnaires), as well as the instruments to be used for optional ISCED Levels (ISCED Level 1, ISCED Level 3) and the TALIS-PISA link.

### Languages

**Standard 4.1** The TALIS questionnaires are administered in a common (state) language.

**Standard 4.2** If there is more than one common (state) language, countries are encouraged to use all of them. The NPMs are responsible in selecting the language(s) for use in the questionnaires. In making this decision, the NPMs should take into consideration the following: languages used for instruction, size of language groups in the country, and political sensitivities. The decision of which language(s) the questionnaires will be administered in will be made prior to the Field Trial and agreed upon by the Consortium.

**Standard 4.3** Unless otherwise agreed upon, all relevant language versions of instruments are developed according to the following standards for both the Field Trial and the Main Survey.

### National adaptation of instruments and manuals

**Standard 4.4** Each Participant's questionnaires include all introduction texts and questions in the international source version as well as the corresponding notes, instructions, response categories and coding schemes.

- Although the default data collection mode is electronic (online), corresponding paper versions should contain the above information.
- This implies that raw data imputation from sources external to TALIS is not permitted.

**Standard 4.5** Questionnaire items used for comparisons (TALIS 2013-2018) are administered unchanged from their previous administration.

- Some parts of the TALIS 2018 instruments are identical to those used in the TALIS 2008 and/or 2013 survey. All of these parts (instructions, question stems, items) should be used exactly as they appeared in the TALIS 2008 and/or TALIS 2013 instruments to ensure comparability of the data between the three cycles.
- Exceptions to this standard are limited to substantial translation and/or adaptation errors or inconsistencies in TALIS 2008 or TALIS 2013.

**Standard 4.6** The questionnaires are equivalent to the international source versions. If needed, adaptations to the national context are made, documented and agreed upon between the national centre and Consortium.

**Standard 4.7** Adaptations to the introduction text of the questionnaires or to the Cover Letters for online participation are to be properly documented in the National Adaptation Forms for Consortium review and approval.

**Standard 4.8** Adaptations to the questionnaires for optional ISCED Levels (ISCED Level 1, ISCED Level 3) as well as the TALIS-PISA link are carried out (documented and approved), if necessary simultaneously.

**Standard 4.9** National Adaptations have to be documented in the National Adaptation Forms for each language in which the survey is administered.

- This means that all structural modifications have to be documented and applied for each language separately.
- Structural adaptation across different language versions have to be identical.

**Standard 4.10** Questions or adaptations unique to any of the optional ISCED Levels (ISCED Level 1, ISCED Level 3) and the TALIS-PISA link also require documentation in the National Adaptation Forms.

**Standard 4.11** The School Coordinator Manual is equivalent to the source version. Agreed-upon adaptations to the national context are made if needed.

- The key aspects (*i.e.* the criteria for teacher eligibility, the number of teachers to be sampled from each school, the definitions, codes and instructions related to the coding of the Teacher Listing and Tracking Forms, including examples to illustrate these codes) should follow procedures set by the Consortium and will be checked by International Quality Observers (IQOs).

#### **National extensions of instruments**

**Standard 4.12** National extensions and adaptations to the instruments are kept to a strict minimum and require review and pre-approval by the Consortium.

**Standard 4.13** National extensions and adaptations do not jeopardise or endanger the completion of the international part of the instruments.

**Standard 4.14** National extensions are generally included at the end of the questionnaires in order to ensure the comparability of the international items.

#### **Translation of instruments and manuals**

**Standard 4.15** All questionnaires are translated into the language(s) of administration in order to be equivalent to the international source versions.

- The Teacher and Principal Questionnaires for the Core ISCED Level 2 survey are provided by the Consortium in two source language versions (English and French) prior the Field Trial and the Main Survey.

**Standard 4.16** Participants are responsible for conducting translations and documenting the process as well as any deviations from the English or French language source versions.

- The decentralised translation requires translation and translation review at the national level using one of the two source language versions.
- The NPM selects a minimum of two persons (one translator and one reviewer) for preparing a national version of each survey instrument, supervises the process of national adaptation and translation, and the documentation of these in the National Adaptation Forms.

- English and French speaking Participants follow the same guidelines and verification procedures as Participants producing instruments in other languages, focusing on the national adaptations of the instruments.

**Standard 4.17** Unless otherwise agreed-upon, the School Coordinator Manual is translated into the common (state) language(s) and is consistent with the international English source version.

### **Translation verification**

**Standard 4.18** National centres prepare all translations of the TALIS 2018 materials in Microsoft Word documents for translation verification within the agreed upon timeline and sequence. For this task the Consortium provides pre-populated Word documents including the Field Trial translations of the questionnaires in the language(s) of the survey Participants.

**Standard 4.19** Translation verification commences only after all adaptations have been agreed upon and after translation is completed.

**Standard 4.20** National centres implement the translation verifiers' comments as necessary and appropriate or, in case of disagreement, document the reasons and rationale for not following the verifiers' advice.

**Standard 4.21** The outcomes of translation verification and national adaptation processes are reported by the Consortium to the OECD Secretariat after the Field Trial and the Main Survey.

**Standard 4.22** Translations of the School Coordinator Manual are not subject to translation verification.

### **Layout verification of online and paper questionnaires**

**Standard 4.23** The layout, formatting and pagination (of paper questionnaires) of all questionnaire material is the same as in the source version.

**Standard 4.24** National centres submit all national versions of questionnaire materials for online and paper layout verification (optical check) and correct discrepancies, mistakes and errors identified by the Consortium.

**Standard 4.25** Paper layout verification commences only after the translation verification process is completed.

**Standard 4.26** Online layout verification commences only after the paper layout verification process is completed.

**Standard 4.27** National versions of the School Coordinator Manual are not subject to layout verification.

### **Quality assurance and control**

The following list includes key features intended to ensure quality standards are met regarding instrument adaptation, translation and verification.

- documentation of national adaptations in the National Adaptation Forms
- Consortium pre-approval of proposed adaptations and extensions
- translation verification and follow-up
- online and paper layout verification and follow-up
- submitted questionnaires (paper and electronic) as used in the data collection

- International Quality Observers' documentation of the utilisation of the Main Survey translation verification results (for a more complete description of IQO tasks see section 7)

## 5 SCHOOL COOPERATION AND WITHIN-SCHOOL SAMPLING

### Rationale and purpose

Obtaining school co-operation, preparing schools, principals, teachers and School Coordinators for their involvement in the TALIS 2018 survey is the key to obtaining high participation rates, fully completed instruments and high quality data, which are necessary to embark on meaningful analysis. Standardised procedures for contacting schools and preparing the within-school sampling, in co-operation with trained School Coordinators, assure appropriate and accurate administration across Participants.

### Obtaining school cooperation and ethics

**Standard 5.1** National centres obtain permission for surveying principals and teachers in sampled schools from applicable national and/or regional school authorities and bodies.

**Standard 5.2** National centres establish a written plan/strategy for reaching school co-operation and participation and obtain support from school authorities and officials, teacher unions, and any other organisations or individuals who are likely to encourage or foster the participation of schools.

**Standard 5.3** National centres submit and discuss their plan/strategy to gain/raise participation of schools, principals and teachers with the Consortium.

**Standard 5.4** National centres establish the first contact with schools in writing by sending an initial school contact letter that provides all the necessary information about the TALIS 2018 project to the head of school (in most cases the school principal or the school governing authorities), requesting the school's participation.

- The initial contact letter to the school should contain the following documents/information:
  - a comprehensive document or brochure that outlines the purpose and goals of the project, the intended use of the data, the confidentiality policy and, in case a Participant implements the TALIS-PISA link option in that school, a description of the intended use of the combined dataset at the international and national levels,
  - key administration information including dates, tasks, expected response burden (*i.e.* number of involved teachers and time required to complete the questionnaires) and the required deliverables,
  - the School Coordinator Manual, if available at this stage.
- The initial contact letter should indicate endorsement of the research by applicable international and national authorities, unions and organisations.

**Standard 5.5** If, after all persuasion strategies and communication channels have been used to obtain participation, the sampled school still refuses to participate, the national centre contacts the first designated replacement school. If that school also refuses to participate, the national centre contacts the second replacement school.

Only refusing schools may be replaced. Schools found to be out-of scope during data collection are not to be replaced (cf. **Standard 3.14**).

**Standard 5.6** National centres document the participation status of each school in the School Tracking Form and in the IEA WinW3S software as described in the operational manuals.

## School Coordinators

**Standard 5.7** National centres, in consultation with the school principal or the school authorities, identify a suitable School Coordinator for each school in the sample.

- School Coordinators, for example, may be active or retired teachers, guidance counsellors or administrative or management personnel in the school who, ideally, do not actually participate in the survey.
- For reasons of confidentiality, and in order to maximise endorsement by teachers, school principals may be unsuitable for the role of School Coordinator.
- As an alternative, a member of the national centre or a person from an external agency who is experienced in working with schools, principals and teachers, may fill the role of the School Coordinator.

**Standard 5.8** School Coordinators have overall responsibility for liaising with the national centre, liaising with all applicable individuals within the schools, coordinating the accurate listing of teachers and their characteristics, verifying that the materials received from the national centre are complete, ensuring the correct distribution of materials, and ensuring/monitoring the timely completion of questionnaires (to all extents possible).

**Standard 5.9** National centres provide the School Coordinator Manual and training to School Coordinators.

- Training is predominantly provided to avoid listing errors and incorrect data collection that may eventually result in the need to drop data.
- Training can be organised in different ways, but the organisation of face-to-face training for all School Coordinators is the most preferable way. Details are to be found in the operational manuals.
- The training should include a discussion of all survey-related aspects relevant to School Coordinators as outlined in the NPM manual and hands-on exercises in preparing Teacher Listing Forms, in completing Teacher Tracking Forms, and in any other applicable procedures.
- If a face-to-face training is not manageable, the preferred alternative for training School Coordinators is an interactive online training.

## Within-school listing and sampling

**Standard 5.10** National centres request the number of eligible teachers from participating schools to prepare a sufficient number of Teacher Listing Forms unless listing happens electronically.

**Standard 5.11** School Coordinators are responsible for listing all eligible teachers on the Teacher Listing Forms following the definition and guidelines given in the School Coordinator Manual.

**Standard 5.12** National centres thoroughly scrutinise all returned Teacher Listing Forms for completeness and plausibility, re-contact School Coordinators in cases of possible errors or flaws (most importantly, but not limited to, under-coverage)

- All listings of teachers must comprise all in-scope teachers as indicated in the Sampling Manual and not be limited to the selected or participating teachers, unless all are selected.

**Standard 5.13** National centres use the IEA WinW3S software to sample teachers in accordance with the defined international sample design.

**Standard 5.14** All schools and teachers are identified using a hierarchical ID numbering system defined by the Consortium.

### **Quality assurance and control**

The following list includes key features intended to ensure quality standards are met regarding school cooperation and within-school sampling.

- documented national school outreach strategies and endorsement/support of the research by relevant organisations and individuals
- comprehensive initial contact to schools
- trained School Coordinators
- IEA WinW3S software, which assists the national centres in sampling teachers, produces all necessary forms and labels to identify and track teachers, stores all relevant tracking information of teachers, and suppresses teacher names before submission of data to Consortium.
- review and scrutiny of returned Teacher Listing Forms by national centres
- International Quality Observers' documentation of the listing activities for the Main Survey

## 6 DATA COLLECTION AND PARTICIPATION MONITORING

### Rationale and purpose

The standards in this section describe the online and paper data collection, rules for material printing, packaging and shipping as well as how to continuously monitor the participation rates as instruments are returned to the national centres.

To ensure comparability between the paper and online questionnaires, it is of importance that the questionnaires across administration modes are identical in content and as similar as possible in layout and presentation.

Closely following the survey schedule and providing sufficient time for principals and teachers to complete the questionnaires contributes to achieving high participation rates. Actively monitoring the participation of schools and teachers during data collection is the only way of detecting reluctant participation early and consequently prompting further efforts to raise participation.

### Preparation, adaptation and language conversion

**Standard 6.1** Regardless of method of data collection (online or paper), all adaptations are documented using the National Adaptation Forms.

**Standard 6.2** Regardless of method of data collection (online or paper), all translations are done using pre-populated Word documents.

**Standard 6.3** Online instruments have to be structurally equivalent and linguistically identical to the paper instruments. All adaptations and extensions made for the paper instruments have to be reflected in the online version as well.

**Standard 6.4** National centres are responsible for converting international questionnaires to the national version, which includes adaptations/extensions as well as translation of text passages from the international questionnaires using the pre-populated Word documents in all administered language(s) provided by the Consortium.

**Standard 6.5** National centres are responsible for translating and verifying text passages exclusively used in the online mode (*e.g.* the text on a “Next” button).

**Standard 6.6** National centres are responsible for translating and verifying text passages exclusively used in the paper mode (*e.g.* the skip instructions for filter questions).

**Standard 6.7** Pre-populated paper instruments are provided by the Consortium reflecting the structure of the English or French source version and containing all unchanged text elements in the respective language(s) for each Participant. Internationally modified questions and nationally added questions are displayed in English and need to be adapted and translated by the national centres.

**Standard 6.8** National centres are responsible for a completion of the layout of the paper questionnaires.

**Standard 6.9** National centres submit the verified national paper questionnaires and the Consortium will perform the layout verification of the paper questionnaires prior to creating the online questionnaires.

- National centres are responsible for the verification of the online questionnaires that are created and set online by the ISC.

**Standard 6.10** For the online data collection, national centres produce the necessary number of cover letters and use the labels provided by IEA WinW3S software or equivalent means to personalise cover letters (*i.e.* add names, IDs and passwords).

**Standard 6.11** For the online data collection option, cover letters for teachers and the principal are provided in sealed envelopes if confidentiality rules or concerns dictate this.

**Standard 6.12** For the collection of online data, cover letters can only be sent out to schools once the online questionnaires are finalized.

### **Material printing, packaging and shipping of paper questionnaires and cover letters**

**Standard 6.13** Once the translated, verified and laid-out version of the instruments are produced and approved by the Consortium, national centres produce the necessary amount of paper instruments and use the labels provided by the IEA WinW3S software or equivalent means to personalise questionnaires (*i.e.* add names, IDs and passwords).

**Standard 6.14** Questionnaires are professionally printed using high quality white paper. All questionnaires are designed to output correctly as letter or A4 sized, saddle-stitched booklets (that is, tabloid or A3 sheets folded in half). Alternatively, instruments can be duplex printed onto A4 or letter-sized sheets and stitched at least twice.

**Standard 6.15** Material send-out packages to schools, addressed to the School Coordinator, contain a copy of the Teacher Tracking Form, one personalised Teacher Questionnaire or cover letter for each teacher listed on the Teacher Tracking Form, one personalised Principal Questionnaire, and a list of the contents of the package to check the completeness of the materials.

**Standard 6.16** Materials are sent at the appropriate time before the data collection period and national centres request a confirmation of the receipt and completeness of the materials from the School Coordinator.

**Standard 6.17** For the return of paper questionnaires, teachers are provided with pre-paid envelopes addressed to the national centre if confidentiality rules or concerns dictate this.

### **Data collection and participation monitoring**

**Standard 6.18** Where prerequisites and agreement of schools and individuals permits, the default method of data collection is by self-administered online questionnaire.

**Standard 6.19** National centres actively inquire whether schools and respondents within schools are able to respond to the questionnaires over the Internet before sending materials.

**Standard 6.20** Paper instruments are prepared and dispatched to serve as a fall-back in case of technical issues (*e.g.* firewalled access), or in case respondents refuse to answer the questionnaires on line.

- This applies even if national centres initially expect to collect 100% of the questionnaires on line.

**Standard 6.21** To ensure consistency and smooth operations, national centres use the IEA Online Survey System software to administer the online data collection. The system is hosted on servers operated by the Consortium.

- No other software products are permissible.

**Standard 6.22** The Consortium is responsible for hosting questionnaires, storing data, maintaining data security, backing up data, and ensuring service availability to the extent reasonably possible.

**Standard 6.23** For paper questionnaires, national centres monitor and track the return status of the completed instruments as they arrive from schools and individuals in WinW3S, minimally weekly, and review the WinW3S participation information and estimates.

**Standard 6.24** In addition to monitoring the return of paper questionnaires, national centres monitor the participation in the online data collection closely, minimally weekly, and follow-up to non-responding Participants.

**Standard 6.25** During the administration of the Field Trial and the Main Survey, national centres submit weekly status reports on survey participation to the Consortium.

**Standard 6.26** School Coordinators distribute questionnaires and/or online data collection cover letters to sampled teachers and principals, collect returned paper questionnaires (unless these are returned directly to the national centre) and record the actual or reported participation on Teacher Tracking Forms.

**Standard 6.27** During the data collection phase, national centres are available to answer School Coordinators' respondents' (principals and teachers) questions when they are in doubt about any aspect of the questionnaire or if they would like more information about the questionnaire or the study in general.

- In person support is provided minimally by phone (as indicated in the questionnaire introductions) during normal office hours.
- Ideally, additional support is provided via e-mail for respondents to be answered within one working day.

**Standard 6.28** School Coordinators specifically ensure that the questionnaires/cover letters are only distributed to the designated sampled teacher, according to the information on the label of the questionnaire/cover letter.

**Standard 6.29** Non-responding or refusing teachers are not to be replaced by any other teacher, sampled or not.

**Standard 6.30** National centres implement effective follow-up and non-response conversion efforts to improve response, utilising support from pertinent authorities, organisations and individuals as needed.

### Quality assurance and control

The following list includes key features intended to ensure quality standards are met regarding data collection and participation monitoring.

- adaptation and translation of the questionnaires within one system
- full optical check between the online and paper instruments before printing the paper questionnaires
- personalised questionnaires or cover letters
- accurate and confirmed material preparations and dispatch
- appropriate measures to ensure the confidentiality of responses
- regular participation monitoring by the national centre to spot issues with reluctant participation as early as possible
- weekly reporting of the data collection progress to the Consortium
- the OSS Data Monitor enables national centres to monitor participation in real-time
- fall-back paper questionnaires

## 7 OBSERVING THE QUALITY OF DATA COLLECTION

### Rationale and purpose

The TALIS 2018 quality control programme is implemented during survey administration in order to i) ensure the high quality of the data collection (National Data Collection Quality Observation), and ii) provide documentation on how the standardised international data collection procedures were followed (International Data Collection Quality Observation and a Survey Activities Questionnaire).

Quality control in TALIS is composed of three main parts: organisation and oversight by the Consortium of an international programme comprising school and national centre visits conducted by International Quality Observers (IQOs); quality control at the national level; and a follow-up online Survey Activities Questionnaire seeking experiential information from the NPMs.

The Consortium will also pilot three extra quality control questions to be translated and administered to TALIS online teacher respondents during the Main Survey. The key area of consideration relates to administration, data security, confidentiality and protection to help the Consortium assess the practical use of the standards.

### International Data Collection Quality Observation

**Standard 7.1** The Consortium conducts an independent International Quality Control programme based on standardised materials and procedures to document Main Survey data collection activities.

**Standard 7.2** IQOs are contracted by and report exclusively to IEA Amsterdam.

**Standard 7.3** The IEA conducts one international training session for Southern Hemisphere IQOs and one international training session for Northern Hemisphere IQOs, providing relevant support materials for both meetings.

**Standard 7.4** The IQOs will collect information on the implementation of the survey within schools by interviewing the School Coordinator.

**Standard 7.5** NPMs will support IQOs during their in-situ school visits and provide the necessary information required for IQO task completion.

**Standard 7.6** For each Participant, 20 schools sampled for the Main Survey are selected and visited by IQOs to observe the administration of the TALIS instruments.

- International Data Collection Quality Observation is not conducted for the Field Trial.
- A failure to meet the international quality control standards during the Main Survey may lead to a corresponding recommendation for annotations in publications.
- The national centre provides the Consortium with the assistance required to implement the school visits effectively. This includes providing a list of participating schools and selecting (in consultation with the IQO) the schools to be visited for international quality observation.
- Irrespective of the options (ISCED Level 1, ISCED Level 2, ISCED Level 3 and the TALIS-PISA link); a total of 20 schools will need to be visited by the IQO during the Main Survey. The Consortium will advise on appropriate and proportional allocation.

## **National Data Collection Quality Observation**

**Standard 7.7** Participants are required to appoint one or more National Quality Observers (NQOs) and implement National Data Collection Quality Observation during both the Field Trial (50% of the sampled schools or at least 10), and the Main Survey (10% of the sampled schools or at least 20). The design of the National Quality Control programme is at the discretion of each Participant. NPMs must summarise and report salient findings to the Consortium within the relevant section of the Survey Activities Questionnaire.

## **Survey Activities Questionnaire**

**Standard 7.8** NPMs complete the Survey Activities Questionnaire (in consultation with the National Data Manager, key national centre staff, or if appropriate, the NQO) after the Field Trial and the Main Survey. This will help document survey activities at the national level.

## **Quality assurance and control**

The following list includes key features intended to ensure quality standards are met regarding monitoring the quality of data collection.

- Survey Activities Questionnaire (Field Trial and Main Survey)
- International Quality Observer Manual and forms (Main Survey)
- In-person training sessions for International Quality Observers (Main Survey)
- Report based on the data collected by IQOs to be reviewed during the data adjudication process (after the Main Survey)

## 8 DATA CAPTURE OF PAPER INSTRUMENTS, VERIFICATION, SUBMISSION AND MANAGEMENT

### Rationale and purpose

To ensure the comparability of the data, uniform methods of data capture of paper instruments and of data editing need to be applied in all participating countries. The data needs to be properly verified and edited to ensure it is free of capture errors, so that a reliable database is available for international analysis. All data files including documentation have to be sent to the Consortium on time.

### Data capture

**Standard 8.1** The default method for data capture from any paper questionnaires is by manual (*i.e.* human) key data entry.

**Standard 8.2** National centres are responsible for manual data capture from paper instruments and for allocating sufficient staff to this task.

**Standard 8.3** National centres train data entry personnel thoroughly using mock materials, advice provided as part of international operational trainings and applicable section of the international operational manuals.

**Standard 8.4** National centres constantly monitor the data capture process, the key operators and the quality of their work by inspecting and verifying data against source instruments as needed.

**Standard 8.5** Data are entered exactly as they appear in the instrument, ignoring any surrounding questions. Data entry staff does not interpret, guess, impute, complete or otherwise correct data.

**Standard 8.6** National centres use the IEA Data Management Expert (DME) software made available by the Consortium to ensure that the manual data capture is in full compliance with the TALIS standards.

### Double/reliability data capture

**Standard 8.7** National centres implement double data capture of non-blank questionnaires.

- Double data capture has to be done independently by two different persons. A check which is available in the data entry software (DME) will verify this.
- For the Field Trial, all non-blank Principal Questionnaires and a minimum of 100 Teacher Questionnaires are double captured. The amount of double captured Teacher Questionnaires should be equally divided among the three different Forms (A-C).
- For the Main Survey, national centres will double capture at least 100 non-blank Principal Questionnaires and at least 5% of all non-blank Teacher Questionnaires (if the total number of paper Teacher Questionnaires is greater than 2000) or at least 100 non-blank Teacher Questionnaires (if the total number of paper Teacher Questionnaires is less than 2000).
- Double data capture has to be conducted for the Core ISCED 2 Level survey only, provided that the exact same key operators are responsible for the capture of data for the different international options.

**Standard 8.8** Each key operator participates in this double data capture exercise and the distribution of questionnaires for double capture to the operators should be uniform.

**Standard 8.9** Double data capture starts as soon as possible in the process to identify systematic problems and misconceptions across operators or problems with particular operators as early as possible.

- This implies that the first batches of paper questionnaires returned from the field are subjected to double data capture.

**Standard 8.10** The error rate (number of discrepancies divided by number of data values entered times 100) between the main and the completed double data capture is less than 1%.

**Standard 8.11** Where double data capture quality requirements have not been met across the key operators, the Consortium may require, at its discretion, the complete re-capture of all questionnaire data or full verification and reconciliation through inspection.

- Where the lack of quality can be clearly attributed to individual key operators, the Consortium may limit the re-capture and verification/reconciliation to the work of the concerned operator(s).

**Standard 8.12** All identified errors and discrepancies are resolved by consulting the original instruments and tracking forms, and correcting the errors in the data capture files. This applies only if *all* paper-based instruments were captured twice in contrast to double capturing a *subset* of paper instruments only.

- Where less than all paper questionnaires are double-captured, no correction of capture mistakes must occur as the raw discrepancy coefficient (*i.e.* before any correction) is used as a quality indicator of data capture accuracy and to assess the need to re-capture paper instruments.

### Data verification

**Standard 8.13** National centres verify the data constantly while capturing, minimally weekly, and again before submission using the available checks in the software provided by the Consortium and following the instructions in the operational manuals.

- Minimally, the data are verified using the built-in checks in the IEA Data Management Expert software; these are i) a unique ID check, ii) a valid value check for nominal/ordinal variables and iii) a valid range check for continuous variables.

**Standard 8.14** Data verification is made by referring back to the original instruments if necessary.

**Standard 8.15** National centres do not otherwise “clean” or “edit” their sample and response data unless instructed to do so in the operational manuals or as explicitly agreed with the Consortium.

### Data submission, processing and archiving

**Standard 8.16** National centres submit all data and all required documentation according to the data management manual and following the file formats described there.

**Standard 8.17** National centres submit Field Trial data and documentation within three (3) weeks after the scheduled end of the data collection, *i.e.* on or before 31 March 2017.

**Standard 8.18** National centres submit Main Survey data and documentation within six (6) weeks after the scheduled end of the data collection, *i.e.*

- On or before 31 January 2018 for all Southern Hemisphere countries participating in the core and ISCED Level 1 and ISCED Level 3
- On or before 31 May 2018 for all Northern Hemisphere countries participating in the core and any of the international options
- On or before 30 November 2018 only for all TALIS-PISA link data of Southern Hemisphere countries

**Standard 8.19** The Consortium maps the nationally adapted variables and recodes these into the international variables, where applicable and possible, during the processing at the international level. National extensions remain as they are and are included in national datasets which are sent back to countries.

**Standard 8.20** After data and document submission, national centres (more specifically the National Data Manager) are available for a minimum of three months to respond to the Consortiums' data queries and to resolve data discrepancies.

**Standard 8.21** National centres scrutinise their own processed draft data products as received from the Consortium with respect to processing errors, plausibility and correct mapping of national adaptations to international variables.

**Standard 8.22** National centres securely store the Field Trial paper questionnaires as well as all original listing and tracking forms minimally until 31 October 2017.

**Standard 8.23** National centres securely store the Main Survey paper questionnaires as well as all original listing and tracking forms minimally until 31 December 2019.

- The Consortium, at its discretion, may request scanned or hard copies of some or all of these materials as necessary for the purpose of quality control.

### **Quality assurance and control**

The following list includes key features intended to ensure quality standards are met regarding data capture of paper instruments, verification, submission and management.

- review of national adaptations from a data perspective prior to implementation
- IEA DME software, which includes checks and reports of data inconsistencies and problems
- national centre review of check reports on a regular basis and correction of data before submission
- material receipt checks for completeness of data and documentation
- Consortium monitoring the data capture accuracy achieved by Participants
- Consortium processing and checks to identify residual issues not previously addressed by the national centre
- additional data checks and cleaning logic at the international level with reports to Participants for commenting and/or correction

## 9 CONFIDENTIALITY, SECURITY AND PREPARATION OF THE INTERNATIONAL DATABASE

### Rationale and purpose

To ensure high participation rates for TALIS 2018, the confidentiality of the respondents has to be protected. This affects the distribution and collection of questionnaires, data capture at the National Centre, data submission to the Consortium and some additional disclosure avoidance measures before publication of the international database. Additionally, each Participant may have to meet certain confidentiality criteria posed by national laws and regulations. The Consortium needs to be made aware of these where they affect the sharing of the TALIS 2018 data, so that they can be addressed accordingly.

### Confidentiality

**Standard 9.1** To ensure confidentiality, all teacher lists or any other lists including direct identifiers such as names or other individual identifying information such as birth dates etc. are to be treated securely and as strictly confidential at all times.

- Over and beyond this requirement, NPMs are responsible for ensuring that all storage, confidentiality and privacy issues comply with national legislation.

**Standard 9.2** All approved project staff working on TALIS at the national centre or a sub-contracted survey organization must understand and obey confidentiality rules and practices in survey research and, regardless of their organisational affiliation, sign a confidentiality agreement or affidavit of nondisclosure in which they agree that they will not i) reveal the content of any confidential, secured or embargoed material or data, ii) make any disclosure whereby a survey respondent or his/her related data could be identified, iii) permit anyone other than the individuals under the same confidentiality agreement to access TALIS materials, data or reports.

- A confidentiality agreement template is included in the NPM manual and also available on SharePoint.
- The Consortium requests hard copies or scans of signed confidentiality agreements.

**Standard 9.3** The national centre exports the WinW3S database before its submission to the Consortium in order to suppress direct identifiers (*i.e.* first and last names) collected and used during the within-school sampling and collection.

### Security and integrity

**Standard 9.4** Data capture and management is carried out on the premises of the NPM's organisation or contracted survey organisation in order to minimise the number of, or even rule out the existence of, paper materials and data records outside of the NPM's reach and control.

**Standard 9.5** All TALIS data and materials, regardless of whether they are designated as secure/embargoed or not, are kept confidential and stored securely at all times.

**Standard 9.6** Access to physical materials and electronic files is restricted to approved project staff under the above confidentiality agreements.

**Standard 9.7** Databases and reports labelled "confidential" or "under embargo" are kept confidential until their public release by the OECD. Participants are directly liable for the security of the data and reports during that period.

**Standard 9.8** Transfers of data on portable media or via electronic means between national organisations and between the Participant and the Consortium must be made through secure and encrypted channels.

- In particular, national centres use the secure SharePoint site to upload and download data, documents and reports.

**Standard 9.9** Data and materials outside of the NPMs secure premises (*e.g.* data on laptops or USB sticks) must be encrypted and protected in case said devices are lost or stolen.

### Availability

**Standard 9.10** NPMs and/or subcontracted survey organisations ensure the continued availability of all data and materials, preventing service disruptions for example due to power outages and hardware failures, by means of appropriate failover and backup systems.

### Preparation of the international database

**Standard 9.11** Each Participant provides the Consortium with early notification of any rules affecting the disclosure and sharing of TALIS response data and its derived variables or codes.

- Participants carefully review the information collected through the instruments and survey operations and provide a description of the affected variables to the Consortium.

**Standard 9.12** Based on confidentiality regulations, each Participant is responsible for either i) implementing any agreed confidentiality measures in its micro-data file before submission to the Consortium or ii) instructing the Consortium on how to implement the methods and modifications in the Participant database, where complexity permits this, before release to other Participants or to the public.

- National data are not released to other Participants or the public until Participants have been given an opportunity to review and comment on their own national data and until the release of such data has been approved by the national authorities, where applicable.

**Standard 9.13** All confidentiality measures implemented in the micro-data prior to the submission to the Consortium are fully and properly documented for Consortium review and commenting.

**Standard 9.14** One of the fundamental objectives of TALIS is to provide data for comparative analysis. Therefore, the TALIS public-use data file contains micro-data from all Participants in the project, provided data quality standards are met.

**Standard 9.15** Participants who decide to withdraw data must inform the Consortium before 31 December 2018 and **only** prior to obtaining access to data from other Participants.

- A deadline and procedures for withdrawing national data from the international micro-level database (the “international database”) is agreed upon by the Consortium and the OECD Secretariat. The indicative date (to be confirmed) is: 31 December 2018.
- Withdrawn data is not made available to other Participants or the public.
- Should the Participant decide later on to make the data available again, the Consortium needs to be notified at the earliest possible point in time and will decide at its discretion whether data can still be included in data products.

## **Quality assurance and control**

The following list includes key features intended to ensure quality standards are met regarding confidentiality, security and preparation of the international database.

- documented confidentiality agreements signed by national centre staff
- security of confidential, secure and embargoed data and materials
- protection of personally identifying data
- documented confidentiality rules and sharing limitations

## 10 DATA ANALYSIS AND REPORTING

### Rationale and purpose

Standards on data analysis and reporting will ensure the application of proper techniques of analysis when using TALIS data, accounting for its complex sampling design. They will aim for consistency and appropriateness of the computational routines, and use of language that avoids causal interpretation of results. The following standards apply to the teams computing and assembling the tables as well as the narrative and interpretations for the TALIS international report, to the national staff preparing their national report, or any other individual conducting secondary analysis with TALIS data later on.

### Data dissemination and reporting

**Standard 10.1** The OECD is responsible for reporting primary analysis results and releasing the data to the public. Embargoes apply to the reporting by parties other than the OECD.

- For each TALIS cycle, the OECD prepares and publishes the international report prior to the release of data for public use.
- No national teams or individuals shall have the right to publish, share with third parties or otherwise announce and disseminate the results from TALIS prior the official release of the international report and data by the OECD.
- The release of international reports by the OECD may be staggered at different points in time, *e.g.* with respect to international options such as the TALIS-PISA link. Standards on embargoed use of the data hence apply to each of these releases individually.

### Data analysis and estimation

**Standard 10.2** All data analysis (primary, by the OECD and secondary, by the national teams) shall apply generally agreed upon scientific practices in the field of education and respect the TALIS design parameters.

- The international reporting can be considered guidance in this respect.

**Standard 10.3** The Consortium provides with the data the design variables needed for estimation and analysis (*i.e.* estimation weights and replication weights), analysis training and software to the national centres to ease the production of the national reports.

- The Consortium computes estimation and replication weights that accompany the national and the international data files. The resampling technique in use is Balanced Repeated Replication (BRR) with Fay's modification (factor 0.5).
- The Consortium provides the national centres with the IEA IDB Analyzer to assist the production of the national reports. The IEA IDB Analyzer is a user interface for use with SPSS (IBM Corporation, 2014) that can be used to conduct basic statistical analysis, while accounting for the complex survey design.
- The Consortium provides training on the use of the IEA IDB Analyzer and the proper estimation methods as well as an analysis manual.

**Standard 10.4** Because the probabilities of selection assigned to the various schools and teachers are different and because non-response patterns vary from school to school, schools and teachers do not have equal estimation weights; therefore, all estimates of school and teacher characteristics must be computed using the appropriate estimation weights through specialised software (*e.g.* the IEA IDB Analyzer) or

statistical packages that support the estimation required by TALIS (e.g. SAS (SAS Institute Inc., 2013), WesVar (Westat, 2008), STATA (StataCorp LP, 2015)).

- The recommended software, IEA IDB Analyzer, accounts automatically for the TALIS complex sampling when estimating population features and standard errors.
- Other software, such as SAS, WesVar and STATA, can be used as well, when the design and replicate weights are properly specified.

**Standard 10.5** Comparisons of estimates and testing for the significance of any differences shall account for the appropriate sampling errors, as indicated in the analysis manual.

**Standard 10.6** TALIS data are collected to support aggregated reporting at the level of a Participant, sub-national entities or other major sub-groups as appropriate and supported by the sample design. In agreement with the confidentiality pledge to respondents, the TALIS data are not intended to be used for reporting at the level of individual schools, or individual teachers within schools.

**Standard 10.7** The structure of the TALIS instruments and the design of the survey do not support causal interpretations and inferences.

- Given that TALIS i) is a cross-sectional survey of teachers, ii) has no component of experimental design and iii) does not rely on a longitudinal sample, results must be interpreted as observation of co-existence of phenomena or changes over time rather than as observation of causalities.
- If a theoretical model is used that allows for causality, that model (hypotheses and limitations) must be specified clearly to the reader.

**Standard 10.8** National centres are invited to reproduce findings from the international report respecting their national context.

- Reproduction of the findings in the international report by national centres is an additional verification step that ascertains the accuracy of the obtained results.
- Conversely, the results in the international report will serve the national centres to verify their computations when preparing their national reports, accounting for the national context.
- When contradiction occurs between the estimates prepared by the OECD and the estimates computed by the national team, the NPMs must alert the OECD and the Consortium for a resolution prior to the release of the initial international reports.

## Publication of Results

**Standard 10.9** The results published in the international report will be subjected to quality control and verification procedures.

- The results in the international report are verified by a part of the TALIS consortium (partner and/or unit) other than the part and/or unit that originally produced the results to ensure correct computation of population estimates and their standard errors.
- The verifier reports the results from the verification directly to the Consortium. When a discrepancy is detected, the Consortium computes the affected statistics once again and corrects the errors, if found.
- When contradiction occurs between the results reported in the international report and the results computed by the verifier, the Consortium must alert the OECD for a resolution before results in the international report are published.

## **Quality assurance and control**

The following list includes key features intended to ensure quality standards are met regarding data analysis and reporting.

- publication and release of analysis results, international reports and a public-use database
- the use of design variables and appropriate estimation weights for estimation and analysis
- the use of the IEA IDB Analyzer or other software handling TALIS sampling design for data analysis
- review of the international report for causal interpretations and inferences
- reproduction of data analysis in the international report

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