INTRODUCTION TO THE INTERNATIONAL AND NATIONAL IMPLEMENTATION STRUCTURE OF PIAAC

First Meeting of the National Project Managers

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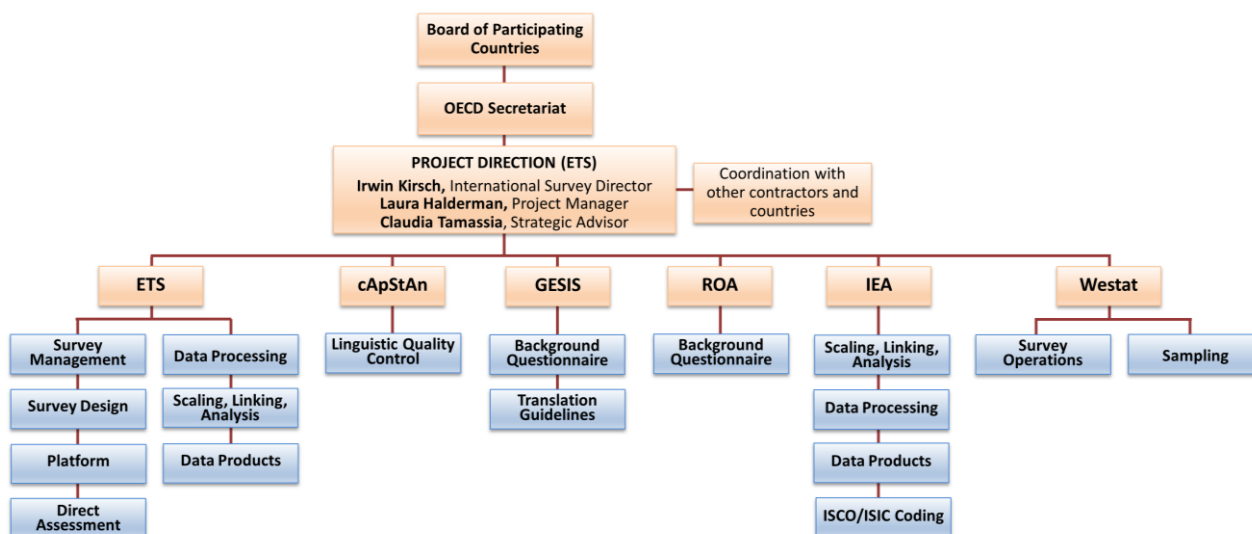
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The Consortium

The PIAAC Consortium, on behalf of the OECD, is responsible for the implementation of the Programme for the International Assessment of Adult Competencies (PIAAC). The Consortium consists of Educational Testing Service (ETS), Westat, cApStAn, the Research Centre for Education and the Labour Market (ROA), the GESIS – Leibniz Institute for the Social Sciences and the International Association for the Evaluation of Educational Achievement (IEA). PIAAC is implemented according to three main areas:

- <u>Development of the instruments for the cognitive assessment</u>: ETS is responsible for the tasks related to the development of the instruments for the cognitive assessment, including Literacy, Numeracy and Adaptive Problem Solving. ETS also is responsible for developing and supporting the test delivery platform that is used in PIAAC. cApStAn supports the test development activities through translation and verification of the various materials.

- <u>Development of the background questionnaire</u>. The development of the background questionnaire is carried out primarily by a partnership of two organizations: the Research Centre for Education and the Labour Market (ROA), based at Maastricht University in the Netherlands, and the GESIS – Leibniz Institute for the Social Sciences (GESIS), based in Mannheim, Germany. In addition to ROA and GESIS, ETS is responsible for developing the delivery platform for this module and as the leader of the Consortium, overseeing the work.

- <u>Project management, survey operations, preparation of data products and support for the analysis of the survey results</u>. The graphic below illustrates the overall structure of the PIAAC project and how the Consortium works together to cover all aspects of project management, survey operations, preparation of data products, and support for the scaling and analysis of the survey results. This aspect of PIAAC involves all members of the PIAAC Consortium.

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The Structure and Role of National Centres

The structure and role of national centres is the countries choice, and will vary according to the size and administrative arrangements of countries as well as on the availability of human and financial resources. Consequently, national costs will also vary widely among participating countries, depending on the manner in which countries choose to implement PIAAC (e.g., use of national statistical office or a private contractor). In some countries, responsibility for the national implementation of PIAAC will rest with a single ministry while in others it will be shared among various branches of the government. Some countries may choose to manage PIAAC through a coordinating committee involving the national stakeholders. Others may sub-contract the implementation of PIAAC to another organisation (e.g., a research institute or survey organisation).

Whatever the organisational structure chosen to conduct PIAAC, countries will need to establish a national infrastructure for the coordination and management of PIAAC. National centres are responsible for ensuring that PIAAC is implemented following the international standards and guidelines that are designed to ensure the comparability and quality of outcomes. In addition to management, coordination and communication tasks, national centres are responsible for drawing national samples, translating and/or adapting the cognitive instruments and questionnaires,

coordinating the administration of both the field trial and the main study, managing technology-related operational issues, preparing and submitting a national data file to the Consortium, reviewing national and international results, and preparing national reports. Based on the consortium's experience in Cycle 1, national teams must appoint a National Project Manager (NPM) who is supported by a team that includes an IT coordinator, a National Sampling Manager and a National Data Manager. In the past, some countries have found it helpful to establish national committees or coordination groups to support specific aspects of the survey.

National Project Manager (NPM)

Each participating country must appoint an NPM to take responsibility for implementing PIAAC at the national level. The NPM has overall responsibility for ensuring that all required tasks are carried out on schedule and in accordance with the specified international standards. A well-qualified NPM will facilitate the conduct of PIAAC. The position of NPM will ideally involve a full-time contract under stable conditions for the duration of the project, to ensure continuity of activities over time. The NPM must be able to commit a significant amount of his/her time to PIAAC. If the NPM does not work full time on PIAAC, s/he must employ full-time senior staff in key positions such as operations and data management.

A person appointed to the NPM position should have experience in planning, organising and conducting large-scale surveys. Essential skills for the NPM position include the ability to identify, select and manage a team of project staff, as well as the experience and competence to handle multiple tasks that may require attention simultaneously. Previous work in the fields of adult literacy, education, educational assessment and household surveys would be very beneficial for the NPM position, as would familiarity with data processing, survey quality control procedures and data file structures. The NPM must possess excellent oral and written communication skills in the local language, as well as in English, which is the official communication language of the PIAAC consortium.   English will be used at all international meetings and for all documents, instruments and other written material prepared by the Consortium.

The NPM will undertake or supervise all tasks related to the development and implementation of PIAAC in his/her country. The NPM must hire or confirm the leading survey institute responsible for implementing PIAAC. The NPM also is responsible for organising the following committees and meetings:

- A national committee composed of leading professionals in the fields of survey operations, research, sampling, education and adult competencies to offer advice to the project and ensure that national views are represented. This committee should reflect the views of the agency responsible for PIAAC, as well as other government agencies and teaching and research institutions. This national committee should meet at regular intervals to review progress, procedures and results throughout the project.

- Groups of national subject area experts to contribute to the development of questionnaire and cognitive instruments. The NPM is responsible for arranging meetings of these groups to develop stimulus materials and items for the cognitive instruments and prepare the country's official response to the questionnaire and cognitive instruments released for review.

The NPM *must* attend the nine NPM meetings scheduled from 2018 through 2023. Based on the agenda for each meeting, the NPM will be asked to bring additional national personnel with expertise as identified by the Consortium. These meetings are convened for three main purposes: 1) to provide a forum for national representatives to review, comment on and ratify proposals presented by the Consortium relating to a wide variety of issues including the cognitive assessment and background questionnaire frameworks and instruments, indicators, sampling requirements, survey administration, data management and confidentiality, monitoring and quality control plans, status reports, and dissemination of results; 2) to provide training for NPMs, and team members, on instruments, translation, sampling tasks, operational procedures, response rates, coding responses in the questionnaire, data preparation, data cleaning, and delivery tasks; and 3) to brief NPMs on data analyses and report preparation at the national and international levels.

The NPM is responsible for the following communication and reporting activities:

- Communicate the country's official position on a range of aspects of the project, both to the Consortium and at NPM meetings.

- Interact with the Consortium and other international committees as needed.

- Prepare reports on the preparation and implementation of the field trial and main study, including detailed reports of sampling plans, adaptation and translation of survey instruments, development of training protocols and manuals, quality control features, scoring reports, and the overall conduct and progress of data collection.

- Monitor and utilise the PIAAC portal for communications on all project-related activities.

- Prepare summaries of data file layouts and country-specific additions to BQ coding schemes.

- Prepare reports documenting data cleaning and verification steps.

- Conduct national analyses, both for data checking purposes and for preparation of national and international reports.

- Review draft international reports.

- Co-ordinate the preparation of national reports of results and documentation of procedures.

The NPM is responsible for the following test development activities:

- Review questionnaires and cognitive instruments for accuracy of information, national interest and functionality.

- Co-ordinate submission of new items for the cognitive instruments in English.

The NPM is responsible for the following translation and adaptation activities:

- Monitor and co-ordinate the translation and adaptation of instruments and supporting materials according to international specifications.

- Document proposed changes to instruments and supporting materials for further verification.

- Communicate with the Consortium on translation and adaptation issues.

- Organise translation of all training and operational manuals as needed.

The NPM is responsible for the following sampling activities:

- Monitor the sample design and selection process according to specifications provided by the Consortium.

- If a country chooses to conduct the weighting step (currently a Consortium task), monitor the weighting process according to specifications provided by the Consortium.

- Monitor the nonresponse bias analysis conducted primarily by the Consortium.

The NPM is responsible for the following survey operations activities:

- Conduct training sessions for supervisors and interviewers (i.e. approve data collector training materials and monitor the quality of data collector training).

- Ensure that procedures for administering the questionnaires and cognitive instruments are thoroughly understood by the field supervisors and interviewers.

- Monitor the production, dispatch and receipt of materials to and from interviewers.

- Monitor progress and track production throughout the field period.

- Ensure quality control measures are implemented throughout the field period using Consortium-prescribed monitoring, verification, and reporting activities.

- Submit Data Collection Quality Control Forms to the Consortium on the agreed schedule.

- Participate in Data Collection Quality Control calls with the Consortium on the agreed schedule.

- Communicate with the Consortium on issues related to field operations as necessary.

.The NPM is responsible for the following data file preparation activities:

- Supervise training of coders and monitor all coding operations according to international requirements.

- Explain data entry procedures and supervise data entry operations if necessary.

- Coordinate and oversee the central data integration from different sources and related data flows interfacing with different systems (CMS, DME, Dashboards)

- Conduct validation checks of data from the survey instruments, following PIAAC guidelines.

- Organise the dispatch of data files to the Consortium.

- Respond to data queries in a timely fashion.

The NPM is responsible for the following data product activities:

- Attend secondary analysis training workshops to understand PIAAC analysis methodologies and to develop expertise in the appropriate use of PIAAC data products.

- Participate in the review and validation of results generated using PIAAC data products.

- Respond to national inquiries on PIAAC data management, data analysis and data summarisation methodologies.

Information Technology (IT) Coordinator

Each participating country is expected to nominate an IT Coordinator who will be responsible for PIAAC's technology-related activities in their country for the interaction with their national contractor. The IT coordinator will act as the primary point of communication throughout the project regarding the information technology aspects of the project. The IT coordinator should be knowledgeable about IT and familiar with survey operations in their country. The work of the IT coordinator will be concentrated in the periods of the project related to preparations for and administration of the data collection during both the field trial (April – June 2020) and the main study (August 2021 – March 2022). During these periods, it is expected that the IT coordinator will work full-time on PIAAC. The IT coordinator will have direct responsibility for the following activities:

- Obtain sufficient tablets to support the survey operations. These tablets must meet the minimum technical requirements established by the Consortium and approved by the BPC and OECD.

- Configure these tablets with survey software to Consortium specifications.

- Configure the international Case Management System (CMS) or integrate an existing national CMS.

- Provide training to interviewers in the operation of the tablets and the survey software. The IT coordinator, together with the NPM and other selected staff, should expect to receive training in the survey software from the Consortium prior to data collection in a "train the trainer" method.

- Provide a national Helpdesk for technical support for the interviewers during the survey administrations.

- Extract survey data from tablets and manage the formatting and cleaning of this data for delivery to the Consortium.

The IT coordinator should have the following qualifications:

- Experience in troubleshooting hardware, networking, web-based and web services problems.

- Experience with managing and configuring the Windows operating system.

- Experience in extracting survey data from tablets and managing the formatting and cleaning of data for delivery.

- Experience using trouble ticket systems and/or providing first- and second-level support.

- Familiarity with survey operations.

- Proficiency in English.

The following qualifications will also be beneficial for IT support operations: i) experience training interviewers to operate tablets and the survey software (this function could also be performed by the National Project Manager); ii) IT certifications for Microsoft Windows (e.g. MCSA/MCSE/MCITP); and iii) IT certifications that are support centered (e.g. ITIL Foundation).

National Sampling Manager (NSM)

Each participating country will appoint an NSM to take responsibility for all sampling-related activities of PIAAC. The role of the NSM is to oversee sampling-related activities and communicate with the Consortium sampling group. The NSM will have direct responsibility for the following activities:

- Develop the national sampling plan.

- Select a probability-based sample.

- Monitor the sample throughout data collection to detect possible errors in the within-household selection process (if applicable), shortfalls in yields, or nonresponse bias.

- Apply adaptive data collection approach as specified by the Consortium to reduce bias due to nonresponse during the data collection period.

- Perform a basic nonresponse bias analysis to select variables for weighting adjustments.

- Provide the sampling information (sampling probabilities, strata, etc.) and other data needed for weighting and nonresponse bias analysis, using the file layout specified by the Consortium.

- Review the national weights created by the Consortium.

- Review the extended nonresponse bias analysis results produced by the Consortium.

- Ensure quality control measures are implemented throughout the sample design, sample selection, sample monitoring, weighting, and nonresponse bias analysis process, using Consortium-developed forms.

- Submit quality control forms to the Consortium on the agreed schedule.

- Communicate with the Consortium on issues related to sampling as necessary.

The NSM must have the following qualifications:

- Advanced statistical training and knowledge;

- Experience in sample design and selection of household samples;

- Familiarity with weighting and nonresponse bias analysis procedures;

- Proficiency in English.

It is recommended that role of NSM is filled by a person with a statistical background who is distinct from the NPM. In that way, the NSM can provide support to the NPM and will be able to quickly and accurately respond to sampling Quality Control questions. It is also recommended that the NSM be able to attend sampling workshops conducted as part of several NPM meetings and led by the Consortium.

National Data Manager (NDM)

Since data related tasks tend to be highly technical and require special skills, each country will appoint a National Data Manager (NDM) to provide support for the NPM tasks and responsibilities.

The NDM is expected to attend the Data Management Trainings for both, the field trial and the main study, and will be responsible for the day-to-day data management tasks within the country. Thus, the NDM should have the following qualifications:

- Possess the required knowledge and skills with respect to survey research in general and develop an understanding of the PIAAC assessment design, systems and instruments (i.e., the background questionnaire and the computer-based cognitive instruments);

- Possess the required technical skills with respect to databases and the conversion between different file formats and data types;

- Have experience in planning, conducting and supervising the data management in large-scale surveys of this kind;

- Be committed to work throughout the duration of the project, including the data collection phases and the subsequent post-collection phases;

- Work, if possible, within the same organisation as the NPM;

- Operate as the main contact person for the IEA and needs to be fully authorised to engage in data editing and cleaning communication with the Consortium;

- Be proficient in English to reliably engage in data related communication.

Pending a decision by the BPC, the Field Trial assessment design calls for a tablet-only administration. If the tablet-only design is approved, the Field Trial analyses will look carefully at the data and determine whether a paper option needs to be added in the Main Survey. If a paper option is added,it is expected that the NPM and NDM will be need to be further supported by staff for manual data capture and entry where necessary during the Main Survey phase. The contribution that technical and data entry personnel make is crucial to the survey's success and quality. Staff should be selected based on their relevant background and experience and provided with comprehensive training specific to the PIAAC survey.

National Steering or Coordination Groups

In countries in which several organisations (e.g. Ministries) or agencies have responsibility for PIAAC (at the level of policy and/or funding), the establishment of a formal mechanism to steer the project and coordinate the activities of the different stakeholders involving all relevant parties should be considered. The exact role of such a body will depend on national circumstances.

The possibility of establishing an expert advisory group (such as a scientific committee) should also be considered to provide a sounding board and advice on technical aspects of the study in support of the NPM and national centre. These individuals can be asked to provide national input during the review phases of the project and assist on any development aspect that may emerge (i.e., review of frameworks, item development, analytical reviews).