

TOOL 6: SKILLS ASSESSMENT

Overview

At a glance

Skills are a key determinant of individuals' employability and an important driver of firm productivity and competitiveness, as well as the broader development process. Depending on the level and type of skills available in the workforce, firms' needs and the matching between skills availability and demand, skills may either promote or hinder the functioning of the labour market and the economy. Education and training programmes and other skill development initiatives often seek to reduce the gaps and mismatches between skills supply and demand. The success of such programmes depends on quality skills assessments, consisting of a range of approaches to systematically examine skills supply and/or demand, as well as any current and/or future skill mismatches.

Box 4.12: Glossary of terms

Skill needs:	Demand for particular types of knowledge and skills on the labour market.
Skill supply:	Level and type of skills that the labour force possesses
Skill mismatch:	Level and/or type of skills available are not in line with labour market needs
Skill shortage:	Type of skills and/or the number of workers is insufficient to meet labour market demand
Skill gap:	Worker's skills fall short of the job requirements
Skill underutilization:	Worker's skills exceed the job requirements

Source: [European Centre for the Development of Vocational Training \(CEDEFOP\) \(2014\), Terminology of European education and training policy: A selection of 130 key terms. 2nd Edition](#); [Quintini, G. \(2011\), Over-Qualified or Under-Skilled: A Review of Existing Literature. OECD](#)

Key information it can provide

Skills assessments represent a broad group of tools to identify current and/or future skills supply and demand. Specifically, skill assessments with a short-term time horizon and medium- to long-term skills anticipation exercises can provide the following labour market information:

- **Skill needs (demand for skills):** Understand the types of skills (technical, soft, etc.) and work experience most valued by employers or found lacking among (potential) hires at the national, regional or sectoral levels, by considering e.g. employers' hiring intentions and the tasks and skills associated with in-demand occupations (validation of occupational profiles), or in the case of future skill needs, by taking into account potential growth sectors and drivers of changing skill needs⁶.
- **Skill availability (supply of skills):** Determine the current level and type of skills in the labour force (including cognitive, soft and job-relevant skills). Forward-looking exercises aim to estimate future availability of skills (e.g. resulting from education and training system reforms).
- **Skill mismatch, skill shortage, skill gap/ skill underutilization:** By comparing skill demand and supply, it is possible to estimate the lack or surplus of skills in specific types of enterprises, specific sectors, regions or the broader economy. The findings can help understand specific training needs and support the formulation of skills development programmes (education and training curricula reforms, apprenticeships), as well as the adoption of modern human resources (HR) strategies.
- **Private sector's response to skill needs and gaps:** Understand how businesses invest in the skills development of their workforce, through on-the-job training, company-sponsored courses, etc.

Data source(s)

Given the range of factors affecting current and future skill mismatches, collecting information from a variety of sources is typically warranted in order to identify key trends and address any potential imbalances. Potential data sources include:

⁶ For example, technological progress, globalisation, climate change.

- Secondary sources
 - Existing literature, including country/regional studies and relevant government strategies and reports (e.g. on industrial policy)
 - National statistics (e.g. census data, Labour Force Surveys; education indicators)
 - Administrative data (e.g. records from the National Employment Agency; online job portals (e.g. vacancies, see Tool 11: Job vacancy analysis); Chamber of Commerce (enterprise statistics))
- Primary sources
 - Qualitative: focus group discussions; key informant interviews (stakeholders include employers, business associations, workers, jobseekers, government institutions, skills councils and training providers)
 - Quantitative: e.g. employer survey (see Tool 9: Enterprise survey); household-based survey; graduate survey (see Tool 10: Tracer survey)

Particularly relevant for skill anticipation exercises are the so-called qualitative foresight and quantitative forecasting models:

- Qualitative foresight:
 - Relies on a mix of primary qualitative data sources, such as semi-structured focus groups or roundtables, expert panels, Delphi-style methods⁷
- Quantitative forecasting:
 - Relies on available statistical data (e.g. on wages, vacancies, qualifications) and econometric modelling

Context requirements (feasibility)

Given the range of available approaches to skills assessment, context requirements may vary depending on the approach taken. The feasibility of conducting skills assessment exercises may depend on several factors:

- **Adequate resources:** Skills assessments based on quantitative primary and secondary data require significant time and resources (funding; data collection expertise and analytical skills). Qualitative approaches, such as focus group discussions, may be easier to implement, but may not yield robust results on their own.
- **Availability and reliability of existing data sources:** Skills anticipation based on quantitative forecasting models heavily depends on the availability of detailed historical records (job vacancies, wages, qualifications, etc.), which may not be available in many developing countries.

⁷ Structured and iterative communication technique with a panel of experts consisting of several rounds of questions, where the responses from one round are fed back to the group to refine answers in subsequent rounds.

- **Ability to conduct primary data collection with active stakeholder involvement:** For both quantitative and qualitative skills assessments, access to key stakeholders (e.g. firm owners, business associations, workers, etc.) is needed to draw more nuanced conclusions. Inputs from different stakeholders help foster inclusive dialogue and collaboration.
- **Time to carry out the assessment:** Quantitative skills assessments (relying on econometric modelling and representative surveys of employers and/or households) are typically conducted over several months. As a result, they may be less suitable to be conducted as part of project appraisal. They are more likely to be carried out later in the project cycle or as a (regular) standalone exercise.

Advantages and limitations

The advantages and limitations of skills assessments are outlined broadly in the table below. Given the variety of approaches to measuring skills, there may be additional benefits and/or drawbacks relevant to a specific assessment method.

Advantages	Limitations
<ul style="list-style-type: none"> • Can offer concrete findings and recommendations relevant to different stakeholders and operationalized in education, training, HR development, etc. • Helps engage a broad range of stakeholders (employers, households, government, etc.) • Flexibility to conduct skill assessments at different levels (local, sector, region, country) and with different time horizons (present/future) • Can offer a balanced perspective on skill mismatches, by considering both demand- and supply-side factors 	<ul style="list-style-type: none"> • Skills are difficult to define and measure directly (often based on self-reporting and subjective opinions), while proxy indicators (occupations, qualifications) may not be perfect substitutes • Regular resource-intensive quantitative assessments are usually warranted to ensure greater reliability or results (which may be unrealistic in many developing countries) • Coordination among a wide group of stakeholders may be challenging • Reliability of anticipation exercises is uncertain, given the reliance on current and past data to make predictions about the future

Box 4.13: Skills mismatch measurement in Serbia

In 2017, the European Training Foundation (ETF) launched a multi-country project aimed at measuring skills mismatches in 7 partner countries across Eastern Europe, North Africa and the Caucasus. Beyond analysing skills mismatches, the project also focused on identifying adequate data sources and developing templates to support regular skills assessments in partner countries.

In the case of Serbia, one of the countries included in the first phase of the project, the research team was able to leverage existing national statistics to analyse skill mismatches. The most important source of information was Serbia's Labour Force Survey. Additional secondary data sources included the ILO School-to-Work Transition Survey (offering data on work experience, employment history, etc.), as well as the National Employment Service survey of companies, providing data on occupations in demand (by education level and specific knowledge).

The analysis highlighted the mismatch between the increasing overall level of education and the continued lack of skills and competencies sought by employers. Young people in particular experience a skills mismatch, as evidenced by their often-difficult school-to-work transition and high youth unemployment. An additional structural challenge is Serbia's transition to a market-based economy. The restructuring process led to significant job losses in some sectors, while new jobs (often in the service sector) required a completely different set of skills.

Source: European Training Foundation (2019)

How to

Defining the scope / prioritizing learning objectives

Several important aspects should be considered upfront depending on the context and programming needs:

- (i) **Priority information needs:** This will determine whether the assessment will consider skills supply, skills demand or both.
- (ii) **Geographic and sectoral scope:** This involves the specification of the geographic and sectoral scope where the assessment is to be carried out, largely determined by the programme's scope (national, regional, sectoral).
- (iii) **Time horizon:** The choice of the most appropriate time horizon (current/future) will affect the methodological approach (e.g. current skills assessment based on a survey of employers; skills anticipation based on quantitative forecasting or qualitative foresight approach).
- (iv) **Extent of data collection:** In case of quantitative data collection, a decision must be made about the degree to which the findings should be representative, as this will significantly influence the sample size and hence the duration and cost of data collection.

Steps/tasks to implement the instrument

The necessary steps to conduct a skills assessment will depend significantly on the information needs, scope of the assessment, time horizon and the preferred data collection method. Key steps in a survey-based skills assessment can be summarized as follows:

1. **Inception phase:** Initial scoping of existing literature and studies focusing on skills supply and demand in the country, as well as any relevant national statistics and administrative data, national qualifications framework, occupational profiles etc. Based on the desk research, the intended scope and workplan of the assessment can be refined. For quantitative surveys, a sampling frame and methodology should be determined.
2. **Design and piloting of data collection instrument(s):** This step would typically include the design of survey questionnaires (employer and/or household survey), as well as the development of guidelines for semi-structured interviews or focus group discussions (as needed).
3. **Data collection:** Depending on the extent of quantitative surveying, survey data might be collected separately by a survey firm in coordination with the consultant team or the consultant team might arrange the data collection process themselves.

4. **Analysis and draft report:** Information on skills supply and/or demand collected from primary and secondary sources is analysed, providing the basis for drafting the report. The draft report serves to gather internal and external feedback prior to the validation meeting.
5. **Validation and final report:** A validation meeting with key counterparts and stakeholders helps validate key report findings and make adjustments as needed, while supporting dissemination and buy-in. Feedback can then be used to finalise the assessment.

Level of Effort

The level of effort (LoE) and time needed for skills assessment and anticipation can vary significantly, depending on the scope and depth of the analysis, time horizon, as well as data collection methods and geographic focus. The estimated minimum level of effort is summarized in the table below:

Steps	Details	Estimated LoE (minimum)
Inception phase	The effort required depends on the scope of the desk review, the availability of secondary data (national statistics, administrative records) and the approach to selecting respondents.	5-10 days
Design of instruments	The time required will depend on the number of instruments, their intended depth (e.g. number of modules in the questionnaires/ focus group guides) and the number of different stakeholder groups to be interviewed (e.g. enterprises, households, government representatives, etc.).	5-10 days
Data collection	Depending on the scope (skills supply and/or demand), sample size, geographic scope, type of survey administration (e.g. face to face, phone, etc.), the estimated level of effort can vary significantly.	10-30 days
Analysis & draft report	The level of effort required for data analysis depends on the variety of data sources used for the assessment. If the data are available electronically, the analysis can proceed at a quicker pace.	10-15 days
Validation & final report	The extent of this phase mainly depends on the magnitude of consultations and validation of results with different stakeholders and institutions, prior to finalising the report.	5 days
Total		30-75 days

Skills requirements

Depending on the depth and extent of data collection and analysis, one would typically seek out a team comprised of a senior expert with demonstrated experience in conducting skills assessments and skills anticipation exercises and a local expert with strong knowledge of the local context as well as experience in data collection and qualitative and/or quantitative analysis.

Lead staff/consultant(s)	Local staff/consultant
<ul style="list-style-type: none"> • Master or PhD in Social Sciences, Economics, Business, Development Studies or a related field • Extensive knowledge of relevant labour market topics, including education and skills development • Demonstrated experience in conducting skills assessment (and anticipation) exercises • Experience in project management/stakeholder coordination (including government, private sector, households, etc.) • Demonstrated expertise in qualitative and/or quantitative data collection, including survey design and implementation (according to the needs of the assignment) • Experience in training enumerators (as needed) • Quantitative data analysis skills (e.g. SPSS, Stata, R) (as needed) • Regional/country experience (preferred) 	<ul style="list-style-type: none"> • Higher education degree in Social Sciences or a related field • Good knowledge of the local labour market, especially with respect to skills • Excellent command of English and local language in written and spoken form • Understanding of the local institutional landscape, e.g. relevant ministries, business associations, etc. • Strong analytical skills and prior experience with data-driven and empirical work • Experience in running surveys and data processing programmes (as needed)

Note that quantitative data collection could either be conducted either by the consultant team and their team of enumerators or by a professional survey firm through a separate contract. Hiring a survey firm might be particularly useful when dealing with a larger sample size.

Other considerations

- **Development of platforms for social dialogue:** Given the range of stakeholders that typically participate in skill assessments and anticipation exercises, it may be possible to use the process to formalise channels for social dialogue and work jointly on resolving skill mismatches, e.g. through national skills councils or sector-level associations.
- **Regular skills assessments:** To ensure skill assessments are conducted regularly in partner countries, it is important to support local capacity building (statistical infrastructure and local staff) and build trust with the respondents and data users.

The World Bank Skills Towards Employability and Productivity (STEP) initiative aims to generate internationally comparable statistics on skills in developing countries, by conducting comprehensive household and employer surveys in low- and middle-income economies. The programme focuses on the skills profile of the labour force, the nature and size of skills gaps, skills demanded by employers and strategies and policies to improve workforce development.

Process

The STEP skills measurement programme relies on primary data collection to understand both skills supply (household survey) and skills demand (employers survey). The surveys use the same concepts and technical standards to facilitate comparison and calculation of skill mismatches and gaps both within and between countries. STEP surveys use a multi-dimensional definition of skills, which includes not only cognitive skills (hard skills, such as numeracy, literacy), but also socio-emotional skills (soft) and job-relevant skills (task-related, technical).

The STEP household survey measures the skills of the working age population, as well as skills acquisition and maintenance, employment history, etc. The survey typically includes 2,000-3,500 respondents (in urban areas) and each interview lasts 120-150min on average. The STEP employers survey focuses on employers' skills needs and perceptions of the quality of workers' skills, as well as the firms' training activities and perceptions of the national education system. The sample includes 300-500 formal sector firms. The interviews typically last only 45-60min to ensure a higher response rate among firms.

A fully-fledged process that includes skills supply and demand surveys can take 1-2 years from inception to final report dissemination (see [World Bank Microdata Library](#)). It includes the adaptation and translation of survey questions (where applicable), 3-4 months of data collection (face-to-face interviews), double data entry process and data cleaning for quality assurance, analysis, drafting of the report, validation and dissemination.

Challenges

Ensuring a high response rate (in particular among employers) has been a challenge in certain countries, where firms lacked time and were reluctant to share sensitive information with outsiders. Furthermore, the first batch of STEP employers' surveys did not include informal establishments, as it relied only on formal firm registers to determine the sampling frame.

Benefits/ conclusions

Despite the challenges, STEP Surveys generate detailed data on skills availability and skills demand to inform policymaking and programming in the field of skills development. Specifically, the results help understand the interplay between skills, employability and productivity. The data highlight key skills that the education system should strengthen, as well as the level of utilization of workers' existing skills. By providing internationally comparable statistics, the STEP initiative facilitates the exchange of best practices among countries.

Source: [World Bank STEP Methodology Note \(2014\)](#)

Further resources

Guides / methodological references

[Bardak, U. and Rosso, F. \(2019\), "Skills development in the informal sector", in Larsen, C. et al \(eds\) \(2019\), Assessing Informal Employment and Skills Needs: Approaches and Insights from Regional and Local Labour Market Monitoring.](#)

[European Training Foundation \(2019\), Skills mismatch measurement in ETF partner countries.](#)

[European Training Foundation, European Centre for the Development of Vocational Training \(CEDEFOP\), International Labour Organization \(2016\), Guide to anticipating and matching skills and jobs Vol. 1-6.](#)

[Inter-American Development Bank \(2016\), Methods to anticipate skills demand.](#)

[International Labour Organization \(2017\), Skill needs anticipation: Systems and approaches. Analysis of stakeholder survey on skill needs assessment and anticipation.](#)

[World Bank \(2014\), STEP skills measurement surveys : innovative tools for assessing skills.](#)

Selected studies

[Danish Refugee Council, Oxfam, CARE, ACTED, Save the Children, Makhzoumi Foundation \(2017\), Skills gap analysis for improved livelihood sustainability in Lebanon.](#)

[European Training Foundation \(2019\), Skills mismatch measurement in Serbia.](#)

[GIZ \(2017\), Skills gap analysis - Balochistan.](#)

[GIZ \(2018\), Skills needs assessment - Initiative of the TVET coalition of Sierra Leone.](#)

[United Nations Development Programme \(2016\), Skills needs assessment: Identifying employers' needs in six economic sectors in Kosovo.](#)