

# KILM 14. Educational attainment and illiteracy

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## Introduction

KILM 14 reflects the levels and distribution of the knowledge and skills base of the labour force and the unemployed. Tables 14a and 14b show the distribution of the educational attainment of the labour force and the unemployed for 137 and 141 countries, respectively, according to five levels of schooling – less than one year, pre-primary level, primary level, secondary level, and tertiary level. Table 14c provides information on the unemployment rate, that is, the share of the unemployed in the labour force, according to three groupings of educational attainment: primary or less, secondary and tertiary for 128 countries. Finally, table 14d presents information on illiteracy rates as the percentage of illiterate persons in the population for 166 countries.

The data in tables 14a, 14b, 14c, and 14d are broken down by sex and wherever possible by the following age cohorts: total (15 years and over), youth (15 to 24 years), and adult (25 years and over).

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## Use of the indicator

In all countries, human resources represent, directly or indirectly, the most valuable and productive resource; countries traditionally depend on the health, strength and basic skills of their workers to produce goods and services for consumption and trade. The advance of complex organizations and knowledge requirements, as well as the introduction of sophisticated machinery and technology, means that economic growth and

improvements in welfare increasingly depend on the degree of literacy and educational attainment of the total population. The population's predisposition to acquire such skills can be enhanced by experience, informal and formal education, and training.

Although the natural endowments of the labour force remain relevant, continuing economic and technological change means that the bulk of human capital is now acquired, not only through initial education and training, but increasingly through adult education and enterprise or individual worker training, within the perspective of lifelong learning and career management. Unfortunately, quantitative data on lifelong learning, and indicators that monitor developments in the acquisition of knowledge and skills beyond formal education, are sparse. Statistics on levels of educational attainment, therefore, remain the best available indicators of labour force skill levels to date. These are important determinants of a country's capacity to compete successfully and sustainably in world markets and to make efficient use of rapid technological advances. They also should affect the employability of workers.

The ability to examine education levels in relation to occupation and income is also useful for policy formulation, as well as for a wide range of economic, social and labour market analyses. Statistics on levels and trends in educational attainment of the labour force can: (a) provide an indication of the capacity of countries to achieve important social and economic goals; (b) give insights into the broad skill structure of the labour force; (c) highlight the need to promote investments in education for different population groups; (d) support analysis of the influence of skill levels on economic outcomes and the success of

different policies in raising the educational level of the workforce; (e) give an indication of the degree of inequality in the distribution of education resources between groups of the population, particularly between men and women, and within and between countries; and (f) provide an indication of the skills of the existing labour force, with a view to discovering untapped potential.

By focusing on the educational characteristics of the unemployed, the KILM 14 indicator can also aid to shed light on how significant long-term events in a country, such as skill-based technological change, increased trade openness or shifts in the sectoral structure of the economy, alter the experience of high- and low-skilled workers in the labour market. The information provided can have important implications for both employment and education policy. To the extent that persons with low education levels are at a higher risk of becoming unemployed, the political reaction may be either to seek to increase their education level or to create more low-skilled occupations within the country.

Alternatively, a higher share of unemployment among persons with higher education could indicate a lack of sufficient professional and high-level technical jobs. In many countries, qualified jobseekers are being forced to accept employment below their skill level. Where the supply of qualified workers outpaces the increase in the number of professional and technical employment opportunities, high levels of skills-related underemployment (see the manuscript for KILM 12 for more information) are inevitable. A possible consequence of the presence of highly educated unemployed in a country is the “brain drain”, whereby educated professionals migrate in order to find employment in other areas of the world.

While not a labour market indicator in itself, the illiteracy rate of the population may be a useful proxy for basic educational attainment in the potential labour force. Literacy and numeracy are increasingly considered to be the basic minimal skills necessary for entry into the labour market.

## Definitions and sources

### *Educational attainment*<sup>1</sup>

The six categories of educational attainment used in KILM 14 are conceptually based on the ten levels of the International Standard Classification of Education (ISCED). The ISCED was designed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the early 1970s to serve as an instrument suitable for assembling, compiling and presenting comparable indicators and statistics of education, both within countries and internationally. The original version of ISCED (ISCED-76) classified educational programmes by their content along two main axes: levels of education and fields of education. The cross-classification variables were maintained in the revised ISCED-97; however, the rules and criteria for allocating programmes to a level of education were clarified and tightened, and the fields of education were further elaborated.<sup>2</sup> Many countries continue to classify education levels according to the levels of ISCED-76, but more and more countries have made the change to the nine levels and ten subcategories of ISCED-97. In 2011, a new classification ISCED 2011 was introduced; however, reporting according to ISCED-11 did not start until 2014.<sup>3</sup> Tables 14a to 14c clearly identify which classification system applies for each record. The main education levels are also summarized in the table below.

<sup>1</sup> For more information relating to definitions of the labour force and unemployment, users can consult the manuscripts of KILMs 1 and 9, respectively.

<sup>2</sup> For further details about the ISCED see UNESCO: *International Standard Classification of Education/ISCED 1997* (Paris, 1998); <http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx>.

<sup>3</sup> For further details on ISCED 2011, see UNESCO: *International Standard Classification of Education/ISCED 2011* (Paris, 2012); <http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx>.

Education classifications used in KILM table 14

| KILM Level        | ISCED-11 Level                           | ISCED-97 Level  | ISCED-76 Level   | Description  |
|-------------------|--|---|--|--|
| Less than primary | X: No schooling                          | X: No schooling   | X: No schooling  | Less than one year of schooling  |
|                   | 0: Early childhood education             | 0: Pre-primary education  | 0: Education preceding the first level   | Education delivered in kindergartens, nursery schools or infant classes  |
| Primary           | 1: Primary education                     | 1: Primary education or first stage of basic education  | 1: First level   | Programmes are designed to give students a sound basic education in reading, writing and arithmetic. Students are generally 5-7 years old. Might also include adult literacy programmes.   |
|                   | 2: Lower secondary education             | 2: Lower secondary or second stage of basic education   | 2: Second level, first stage   | Continuation of basic education, but with the introduction of more specialized subject matter. The end of this level often coincides with the end of compulsory education where it exists. Also includes vocational programmes designed to train for specific occupations as well as apprenticeship programmes for skilled trades. |
| Secondary         | 3: Upper secondary education             | 3: Upper secondary education  | 3: Second level, second stage  | Completion of basic level education, often with classes specializing in one subject. Admission usually restricted to students who have completed the 8-9 years of basic education or whose basic education and vocational experience indicate an ability to handle the subject matter of that level.                               |
|                   | 4: Post-secondary non-tertiary education | 4: Post-secondary non-tertiary education  |  | Captures programmes that straddle the boundary between upper-secondary and post-secondary education. Programmes of between six-months and two years typically serve to broaden the knowledge of participants who have successfully completed level 3 programmes.   |
| Tertiary          | 5: Short-cycle tertiary education        | 5: First stage of tertiary education (not leading directly to an advanced research qualification); subdivided into: |  |  |
|                   | 6: Bachelor's or equivalent level        | 5A  | 6: Third level, first stage leading to a first university degree                             | Programmes are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programmes. Duration is generally 3-5 years.   |
|                   |  | 5B  | 5: Third level, first stage, leading to an award not equivalent to a first university degree | Programmes are of a typically "practical" orientation designed to prepare students for particular vocational fields (high-level technicians, teachers, nurses, etc.).  |
|                   | 7: Master's or equivalent level          | 6: Second stage of tertiary education (leading to an advanced research qualification)                               | 7: Third level, second stage   | Programmes are devoted to advanced study and original research and typically require the submission of a thesis or dissertation.   |
|                   | 8: Doctoral or equivalent level          |   |  |  |
| Not definable     | 9: Not elsewhere classified              |   | 9: Education not definable by level  | Programmes for which there are no entrance requirements.   |
| Not stated        |  | ? : Level not stated  | ? : Level not stated   |  |

The major attainment levels in KILM 14 are primary, secondary and tertiary education. Primary education aims to provide the basic elements of education (for example, at elementary or primary school and lower secondary school) and corresponds to ISCED levels 1 and 2. Curricula are designed to give students a sound basic education in reading, writing and arithmetic, along with an elementary understanding of other subjects such as history, geography, natural science, social science, art, music and, in some cases, religious instruction. Some vocational programmes, often associated with relatively unskilled jobs, as well as apprenticeship programmes that require further education, are also included. Students generally begin primary education between the ages of 5 and 7 years and end at 13 to 15 years. Literacy programmes for adults, similar in content to programmes in primary education, are also classified under primary education.

Secondary education is provided at high schools, teacher-training schools at this level, and schools of a vocational or technical nature. General education continues to be an important constituent of the curricula, but separate subject presentation and more specialization are also found. Secondary education consists of ISCED levels 3 (designated “upper secondary education”) and 4 (designated “post-secondary non-tertiary education”), and students generally begin between 13 and 15 years of age and finish between 17 and 18 years of age. It should be noted that the KILM classifications of primary and secondary education differ from the classifications used in UNESCO publications, in which level 2 is termed “lower secondary education”.

Tertiary education is provided at universities, teacher-training colleges, higher professional schools and sometimes distance-learning institutions. It requires, as a minimum condition of admission, the successful completion of education at the secondary level or evidence of the attainment of an equivalent level of knowledge. It corresponds to ISCED

levels 5, 6, 7 and 8 (levels 5A, 5B and 6 in ISCED-97 and levels 5, 6 and 7 in ISCED-76).

In addition to primary, secondary and tertiary education, KILM 14 also covers two other categories of educational attainment that correspond to ISCED levels: less than primary (levels X and 0); and level of education not definable (level 9).

The statistics on educational attainment of the labour force, including the unemployed, were obtained from the ILO online database (ILOSTAT); the Caribbean Labour Statistics Dataset; the OECD and EUROSTAT online databases; and information collected from National Statistical Offices. Information on educational attainment is typically collected through household surveys, official estimates and population censuses conducted by national statistical services.

### **Illiteracy rates**

Literacy is defined as the skills to read and write a simple sentence about everyday life. Illiteracy is the inverse, that is, the lack of the skills to read and write a simple sentence about everyday life. The source of information for the number of illiterate persons and the illiteracy rates is UNESCO’s Institute for Statistics (UIS).<sup>4</sup>

The estimates are either national, based on data collected during national population censuses and household surveys, or are UIS estimates. Information about the model estimation methodology is available on the UIS website.

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### **Limitations to comparability**

A number of factors can limit the appropriateness of using the indicators for comparisons of statistics on education between

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<sup>4</sup> The UIS literacy and illiteracy estimates are available at website:  
<http://www.uis.unesco.org/Literacy/Pages/default.aspx>.

countries or over time. First, it should be noted that the same limitations relating to comparability of other indicators based on labour force apply here as well. The discussion in the corresponding section of the KILM 1 and 9 manuscripts should be read for additional details on the caveats relating to comparability.

In addition to the differences associated with varying information sources, the way in which individuals in the labour force are assigned to educational levels can also severely limit the feasibility of cross-country comparisons. Many countries have difficulty establishing links between their national classification and ISCED, especially with respect to technical or professional training programmes, short-term programmes and adult-oriented programmes (ranging around levels 3 and 5 of ISCED-76 and levels 3, 4 and 5 of ISCED-97). In numerous situations, ISCED classifications are not strictly adhered to; a country may choose to include level 3 (secondary) with levels 5, 6 and 7 (tertiary); or levels 1 or 2 (primary) may include level 0 (pre-primary). It should also be noted that in a few countries ISCED levels are combined in a different way; for instance, levels 1 and 2 (taken together as the primary level) may refer to level 1 only, as in many countries in Latin America & the Caribbean, or to level 2 only. It is necessary to pay close attention to the notes – specifically, the notes given in the column “Classification note” – in order to ascertain the actual distribution of education levels before making comparisons.

An issue that affects several countries in the European Union subgroup of the Developed Economies originates from the way in which those who have received their highest

level of education in apprenticeship systems are classified. The classification of apprenticeship in the “secondary” level – despite the fact that this involves one or more years of study and training beyond the conventional length of secondary schooling in other countries – can lower the reported proportion of the labour force or population with tertiary education, compared with countries where the vocational training is organized differently. This classification issue substantially holds down the levels of tertiary education reported by Austria and Germany, for instance, where the participation of young people in the apprenticeship system is widespread.

Limitations to comparability of information on illiteracy rates, as given in table 14d, exist because of variations in the definition of illiteracy. The most common definition is the inability to read and write a simple statement about everyday life. However, different countries have different social and cultural contexts, different definitions and standards of literacy, and different methodologies for collecting and compiling the literacy data, as well as variations in the quality of data collected, and caution is needed in comparing the literacy situations among countries and regions. Some countries define illiteracy, not by reading and writing aptitude, but by the years of schooling attained. For example, a person is categorized as illiterate in Estonia (2000) who has not completed primary education, and in Malaysia (2010), an illiterate is a person who has never been to school. These data points, therefore, should not be compared against, say, Angola (2012), where illiterate persons are defined as those who cannot easily read a letter or a newspaper.